

The Technology Review

VOL. IX.

APRIL, 1907

No. 2

FRATERNITIES AND THEIR PLACE IN INSTITUTE LIFE

One of the most important problems of the Institute to-day, and one that has been widely discussed, is how to provide its students opportunities for social development in conjunction with a thorough technical training. It is generally conceded that technical proficiency is not enough to insure the highest success. A man must not only be a good engineer, he must also know how to deal effectively with men. While few would question the value of the scientific training that is given to Tech men or desire that its standards should be lowered, many do regret that our graduates are often deficient in those qualities that make for leadership. Anything that would increase their efficiency should be fostered by the authorities.

One phase of this subject has so recently been emphasized by Mr. Litchfield in an article in the October number of the REVIEW, in which he makes a plea for "An Apprenticeship for Business Responsibility," that it seems an opportune moment in which to draw attention to an institution which has been for many years a feature of the life of Technology, and which has been a force working in the desired direction. I refer to fraternities.

To understand the position of fraternities to-day, it is

technology review

Published by MIT

This PDF is for your personal, non-commercial use only.
Distribution and use of this material are governed by copyright law.
For non-personal use, or to order multiple copies please email
permissions@technologyreview.com.

though excellent in their way, have none of the peculiar qualities that make the strength of the fraternities. In them students are associated with one another, but the tie is a loose one, and carries nothing of the obligation of one member to another which is such an important feature of the fraternity bond. As a consequence, they cannot develop to the same degree comradeship and mutual helpfulness during the college course, nor can they have the same influence in perpetuating the interest of their members in their Alma Mater after graduation. It is a custom of the fraternities in many colleges to hold at commencement time reunions which bring back yearly to the college many alumni and former students who would otherwise rarely revisit the school, and who are thus kept in closer touch with its development and needs. The fraternity connection is thus often the link which binds the graduate to his college.

If fraternities are of benefit to the college man, they must be to a still greater extent to the Technology man, who has so few social opportunities. Since the Institute does not provide dormitories and many of the students are forced to seek lodgings in boarding-houses throughout the city, where the influences are often not of the best, any organization that offers to even a few students home environments should be welcomed. The fraternities, especially those maintaining chapter houses, afford their members a good home with attractive surroundings, congenial companionship, and plenty of wholesome food, all at a moderate cost. Furthermore, the responsibility that the men feel for the reputation of their chapter is, I believe, an incentive to right living and good scholarship.

It is occasionally asserted that the fraternity houses at the Institute are frequently places for riotous living, and that the life in them is detrimental to scholarship. These charges

are usually made by men who have neither enjoyed the advantages of fraternity life nor investigated the conditions that actually prevail. The criticism is the more serious because of the injustice it does to a large number of young fellows who are striving to uphold the ideals of their chapters and of the Institute, and who desire to win the respect and regard of the Instructing Staff and the student body. While there have been in the past a few chapters that did not frown on drinking and dissipation, and though there are one or two such to-day, I know, from actual observation and through consultation with representatives of the chapters and their alumni, that in the majority of fraternity houses either no liquor of any kind is permitted, or beer only at smokers and reunions. Out of fourteen chapters possessing fraternity houses, five allow no liquor of any kind in the chapter house, seven allow beer only on special occasions, while two have no rule in regard to the matter. For a Freshman who has any tendency towards dissipation the daily comradeship of a group of fine fellows, all interested in his welfare, must assuredly be a more helpful influence than the life in an ordinary boarding-house. And it is especially during the first years of his Institute course, when there is a danger that his newly acquired freedom and independence may lead to excesses, that the fraternity proves of unquestioned value.

Perhaps the most satisfactory way to meet the criticism concerning the detrimental effect of fraternity life on scholarship is to draw attention to the position that the fraternities themselves are taking on this question. The spirit that pervades most of the chapter houses is one of serious work. There is frequently a rule, either written or unwritten, that all music and noisy forms of amusement shall cease at eight o'clock, so that quiet shall prevail for the benefit of those desiring to study. Moreover, in most chapters it is customary

for two or three of the upper class men to examine the five weeks' report of standing of their members in the Freshmen and frequently the Sophomore classes, and, whenever the record is in any way unsatisfactory, to bring the requisite influence to bear to improve it. That important work has been accomplished in this way, the Dean and various members of the Instructing Staff can bear witness. The fraternity man has, undoubtedly, more distractions than a student living by himself outside, yet there is nothing about the life in a fraternity house that should interfere with the maintenance of an excellent record. Moreover, those very distractions tend to keep the men mentally refreshed, active, and alert, and frequently are of a nature to supplement to advantage the essentially technical training of the Institute.

In this connection I wish to draw attention to the fact that many of the fraternities offer their members some opportunities for training along literary and administrative lines. The policy pursued differs in the various chapters, but about half of them make a literary program an important feature of their meetings, and endeavor in this way to give some practice in the presentation of papers, in debating and extemporaneous speaking. It is to be regretted that this practice is not universally followed. In all chapters an excellent chance is given to become familiar with parliamentary procedure, and the frequent informal dinners and alumni reunions afford some training in after-dinner speaking. The administration of the chapter houses is based on sound business principles. In most cases the management is intrusted to two committees, one to take charge of the house and the other of the table. The former looks after the leasing of rooms, the collection of rents, and the payment of the running expenses, including the wages of servants: the second has supervision of the table, including the purchase of supplies. Both

Fraternities and Their Place in Institute Life 167

committees are responsible to the chapter, and their accounts are audited. The men recognize the value of the experience gained in serving on these committees, and are glad to share in the work as far as their time permits. In a few cases it has been found that personal supervision of the table, including daily marketing and planning of the meals, demands more time than a student can well afford to give. Consequently, in these cases this important work has been put into the hands of a steward or a housekeeper.

The growth of Greek letter societies at the Institute has been a steady one. In 1885-86 the membership was 52, or 8.5 per cent. of the student body, while in 1905-06 the membership had risen to 335, or 22.4 per cent. At present there are sixteen fraternities represented. Fourteen of these support chapter houses, all situated in the most desirable residential districts. Nearly two hundred men, or 55 per cent. of the total fraternity membership, live in these chapter houses, the average cost for board and room being between \$35 and \$40 a month, a sum not much in excess of that paid by most of our students for less desirable quarters. Of these houses, four are owned, and the remainder leased. That so few are owned is in part due to the agitation of the question of the removal of the Institute to a new site, most of the chapters preferring not to invest in property under such unsettled conditions.

If it is acknowledged that fraternities at the Institute contain much of benefit to their members, there remains to be considered the important question of their influence on the general student body. The fear has been expressed that fraternity life may tend to "cliquishness" and endanger the splendid democratic spirit that has always been characteristic of Technology. There seems to be little ground for such anxiety at present, and there is small likelihood that

the relations between the fraternity and non-fraternity men will ever assume the strained and unnatural attitude that unfortunately exists in some colleges. The Institute is a professional school where the men are animated by a definite purpose, and the seriousness of the work leaves them little time for social jealousies. Fraternity and non-fraternity men are found working together in the various student activities, such as the *Tech*, *Kommers*, Show, athletic meets, Class Day, and so forth, and the testimony that I have gathered indicates the friendliest feeling between the two sets. What is needed at the Institute to foster a democratic spirit and to draw all groups together is a club-house where the men can gather for recreation and general sociability. This need will be supplied when we have the Walker Memorial. Until then it is natural for fraternity men to withdraw to their chapter houses, where they find attractive and comfortable surroundings and congenial companions. These advantages they show a disposition to share with those outside their circle, as is apparent by frequent informal smokers, at which are to be found many non-fraternity men and members of the Instructing Staff, as well as representatives of other fraternities. The spirit of good fellowship that prevails at these gatherings is an evidence of the good feeling that exists among all classes of students at the Institute.

GEORGE V. WENDELL, '92.

RECRUITING

As an exercise in paragraph writing, in the first year English Composition work this term, two hundred and fifty Freshmen wrote briefly answers to this group of questions: "How did you, having decided upon a technical education, come to choose the Institute from among technical schools? Was your choice mainly your own or that of parents? Had you or your parents acquaintance with graduates of the Institute? Was the choice influenced by school-mates or teachers?" Although the answers were not definite enough to be of statistical accuracy, and probably were further deficient because the boys could neither understand nor remember the complex of influences that determined the choice of their college, these paragraph replies, especially in points wherein they generally agree, give interesting and, it may be supposed, trustworthy information. Several impressions derived from reading the replies may be of interest to Technology graduates.

Noticeable, first of all, is the indication that the choice of their college was determined rather more commonly by the boys than by their parents. Many parents are reported to have directed the choice, being, in several cases, themselves former students or graduates. A considerable number, however, merely suggested or urged, without determining a choice of the Institute; and a very large number are reported to have acquiesced, with more or less warmth of approval, in the son's selection. A few are credited with a rather ignominious indifference; and a very few seem even to have objected. Of these last, two are apparently unreconciled; a third was converted by his son's assurance that

he "meant business," and so belonged in Tech; another, converted from a preference for Yale, insisted on Tech when the boy, reciprocally, became converted to Yale. Possibly these boys have often supposed themselves responsible for a choice really that of their parents; but the enthusiasm in the replies would seem to indicate a real initiative and, to an unusual degree among college sub-Freshmen, preference of career and definiteness of purpose.

The determining reasons are, in almost every case, many. An obvious one for a considerable number is neighborhood; twenty include it as one among other influences; twenty-five call it the determining reason. Curiously few, in speaking of the Institute as the only college near enough for them to attend while remaining near or living at home, seem to have considered engineering courses at Tufts or the Lawrence Scientific School, the Sheffield School or Worcester Polytechnic.

"General reputation" is the consideration most commonly mentioned. Very many assign this reason without more definite explanation; a few allege it as the sole reason; some as the initial influence, more as the determining reason. That "general reputation" spreads far is evidenced by the fact that one student was thus attracted from South America; that it may, though vague, be influential is shown by the fact that two students were dissuaded by it from a previous choice of other schools.

An appreciable element in the "general reputation" of the Institute is the newspaper paragraph. Mention is made by several of particular news items that were to them of significance influential in their choice,—items about the foreign government pupils, about the United States Government pupils at Tech, about "the feats of Tech graduates," or Mr. Edison's remarks in the *Sun*.

The catalogue is mentioned by some half-dozen replies. One sent by a cousin to an Egyptian boy dissuaded him from his previous choice, Cornell. One English father, in doubt, was confirmed, the son says, by the Institute "prospecti."

Among personal influences, surprisingly frequent mention is made of that of schoolmates, boys intending to enter Tech who influence their classmates to come also, or boys already undergraduates in Tech who influence friends still in school. Of such many are mentioned as initiating the writer's choice, still more as determining, a few even as dissuading from some previous choice,—from Cornell, from Yale, from Lawrence Scientific, which was urged by the school principal for the benefit of its college life.

The influence of school-teachers is considerable in determining a boy's choice of his college. With some boys,—one a German, another a Spanish-American,—the teacher initiated the selection; in a large number of cases the advice of teachers was decisive. A teacher of English is reported solely to have determined one boy; another teacher, graduate of Dartmouth, was similarly influential; one dissuaded a boy from previous choice of the University of Pennsylvania; and another dissuaded an Ecuador boy from technical education in Paris. Two teachers are reported to have advised against Tech, one "because it is too hard," a second because he preferred Dartmouth, "though he acknowledged the high standard of Tech." One teacher recommended Tech only as supplementary to previous, academic training.

The personal influence much the most frequently mentioned is that of the Technology graduates. Of the parents who directed their son's choice, several were graduates or former students, and very many were influenced by acquaintance with graduates. Of the boys responsible for

their own choice, numbers declare acquaintance with graduates the initial reason for their choice; and, among these, two were Spanish-American, one a Belgian, and one a German. Graduates are mentioned as decisive influences in a great many cases, in eleven of which the graduates were brothers to the boys so persuaded. Foreign pupils are frequently mentioned as sending to Tech other boys of their own nationality. Graduates are in some cases said to have changed a previous choice, one dissuading a Harvard parent from sending his boy to the Lawrence Scientific School. One boy came to choose Tech because his sister was acquainted with Technology graduates.

Several contributory influences were mentioned, hard to classify among any of the previous groups. Three answers declare, rather desperately, that among technical schools the writers chose Tech because they "didn't know any other"; one writer asserts, refreshingly, that he came because it was "so hard to get in"; another, cautiously, that he hasn't chosen any engineering course yet, and Tech gives him the widest leeway for changing his mind; another, confidently, that he was sent to the Institute because papa knew Mr. Rand.

An impression disconcertingly emphatic is the almost invariable insistence on money. That a boy should eagerly desire a profession which will secure for him as promptly as possible capacity to secure an honorable living is completely gratifying; but it is seriously to be remarked that, for the undergraduate mind, money seems to have an appeal to the exclusion of any consideration of human serviceableness or of intellectual delight in knowledge efficiently applied.

Most remarkable is the degree of influence for good or for evil exercised by the Institute graduates. It is demonstrably no mere piece of pedagogical piety to say that the name and

success of Technology depend mainly on the conduct of the alumni,—on their willingness to acknowledge and their eagerness to reward the service the Institute rendered them in training them. Those who cannot yet contribute largely from their earnings can render service none the less genuine by enthusiasm and sacrifice in maintaining *esprit de corps* in graduate meetings and associations, in extending by every legitimate means that subtly influential “general reputation,” and in conducting, unofficially, the constant recruiting which should send to Tech the most promising and desirable boys of scientific taste out of every community.

HENRY L. SEAVER.

A SKETCH OF PROFESSOR CROSBY'S WORK,
THIRTY-FIVE YEARS ASSOCIATED WITH
THE MASSACHUSETTS INSTITUTE OF
TECHNOLOGY

It is understood that after the present year Professor William Otis Crosby is to devote himself to original research and to expert work. These have been such important features in his past activity that it seems to be an appropriate time to notice them in connection with his work as a teacher, now that he is about to relinquish the latter.

He first became known to the Institute as a student in 1871, but was occupied in mining in Colorado the following year, and returned to the Institute in 1873. The Faculty gave him credit for the studies he was making until he became a regular student, and graduated in the class of 1876 in Natural History, as Course VII. was then called. His ability as an investigator was brought before the Faculty of the Institute by his graduating thesis upon the "Geology of Eastern Massachusetts."

He was assistant in palæontology in 1877, and in 1878 was made assistant in geology and palæontology. At that time he began to teach classes in geology and mineralogy. His work as a teacher of geology was much benefited by his work in research. Each day when he returned from his field studies he brought with him specimens which gave character and practical value to his work as instructor. At first the Institute possessed no geological collections of value, nor could it afford to make appropriations for their purchase, but he accomplished much by his success as a collector. The district about Boston is a rich field for one in

quest of the different kinds of rock specimens. These he gathered until he has been enabled to place before each member of his classes selected specimens of each of the leading kinds of the rocks of the globe. These have been studied in classes under his personal direction, and the students have thus acquired a practical knowledge of their characteristics. Thus his instructions have been conducted in the fullest spirit of the educational work at our Institute.

Professor Crosby has been called a born collector, but the writer thinks of him as an experienced, enthusiastic, and scientific collector. His gathering of the numerous specimens of the characteristic rocks of so many species in Eastern Massachusetts has had another bearing upon his work at the Institute. Exchanges were freely made, and in that way he acquired for the Institute a considerable amount of material for the collections in mineralogy and structural geology. The collection in structural geology which has been made by him and is now at the Institute is one of very unusual value for teaching, and men in other institutions have frequently spoken of it with great admiration. A large and representative collection of ores and non-metallic products of the mining regions west of the Mississippi River, including Alaska, has been made by the individual labors of Professor Crosby with little expense to the Institute. The collection of minerals as it was transferred by him to Professor Warren was well supplied with excellent material, considerable of which was collected by him at the various mineral-producing regions. His journeys were extensive; for the region about Boston gives almost no specimens considered by mineralogists suitable for a collection. The Institute also became able to make appropriations which assisted Professor Crosby in making journeys and in the purchase of foreign materials not accessible to a collector in

this country. But it is largely due to Professor Crosby's industry and generosity that the Institute owes its excellent collections in mineralogy, lithology, structural geology, and especially in economic geology.

Professor Crosby's researches upon the "Geology of Eastern Massachusetts," which he began before his graduation and still continues, make an essential feature in his life-work. The geology of this district is of such an exceedingly complicated character, and the study of it requires such familiarity with many of the most difficult problems, that one must necessarily devote a large amount of time to its interpretation. He has been unsparing in his efforts in this direction, and it can certainly be said of him that no person has ever known all the details and individual features of this region so intimately as Professor Crosby. In this way he has contributed much to the advancement of the science of geology. He acted as assistant in mineralogy and geology for the Boston Society of Natural History for more than twenty years, and the Institute collections were much enriched by mutual agreement of the two institutions and his united labors. The Boston Society of Natural History is now publishing his continued work upon the "Geology of the Boston Basin," in eight parts. Three of these parts have already been published, the fourth is nearly ready for the press; but the remaining four parts are yet dependent upon the continued activity of their author. It will thus be seen that Professor Crosby is now to have a better opportunity for completing this monumental piece of geologic work than he could have had if he were to have continued to give instruction to the classes at the Institute. When this is completed, the Institute will have even greater reason than it has at present for being proud of the labors of one of its active scientific men.

Also Professor Crosby has been sought for a large amount of expert work as a practical geologist. In addition to the numerous services he has rendered to mining companies he has been the geologist of the Metropolitan Water Board, and for the most important work of the New York Board of Water Supply for Greater New York.

Professor Crosby is emphatically a Technology man. Here he has been a student, a student assistant, and graduate. He has been department assistant, instructor, assistant professor, associate professor, and full professor, thus filling in order the complete line of appointments which the Institute can offer to any man in active work. His uniform good health and his enduring strength, together with his relief from teaching and his established rank as a man of science, promise much for his further usefulness.

WILLIAM H. NILES.

REGINALD ALDWORTH DALY

On the 12th of March Dr. R. A. Daly, of Ottawa, was called to become Professor of Physical Geology at the Institute, and Dr. Daly has accepted the appointment, to take effect Oct. 1, 1907. The new chair has a twofold significance,—it marks the importance of earth physics to engineers and inaugurates the establishment of a research laboratory of physical geology at the Institute. The policy of the Department of Geology is to serve with as great efficiency as possible the Courses in Mining and in Civil Engineering. The main work of both these professions deals with physical geology in all its phases.

The man called to occupy this post is a combined scholar, field worker, and thinker of new principles. He is the product of the example of two great masters in geology who were his teachers,—Josiah Dwight Whitney and Nathaniel Southgate Shaler. From the former Daly won inspiration concerning men and books, from the latter the point of view which sees the earth as a physical laboratory. From both of them he learned teaching, especially from Professor Shaler, who was the most successful teacher of geology this country has produced. Dr. Daly has shown in all his work the inspiration of Whitney,—in his love of books, his careful thoroughness in library research, his wide learning in the scholarship of Europe. On the other hand, Professor Shaler's guidance is evidenced in his field work. Everything which Professor Daly has published has been based on extended field investigation. It is the kind of investigation, moreover, which attacks problems, not the sort which merely maps areas. He has a horror of what he aptly calls

“stamp-collecting” in geology,—merely recording unrelated facts. Beginning in the mountains of New England, he attacked without hesitation the most profound problem in geology,—the origin of granite. His field work has since included Nova Scotia, Labrador, the Caucasus, Italy, Switzerland, Germany, France, and Great Britain, a section six hundred miles long in the north-western Cordillera, and Mexico.

Dr. Daly was born on May 19, 1871, at Napanee, Ontario. He graduated from Victoria College in Ontario in 1891. At Harvard he took the degree of Master of Arts in 1893 and Doctor of Philosophy in 1896. In 1896 he was awarded the Parker travelling fellowship, and studied with Rosenbusch, Goldschmidt, Suess, Penck, and Fouqué in Heidelberg, Vienna, and Paris. From 1893 to 1895 he assisted Professor Shaler in his famous course, “Geology 4.” From 1898 to 1901, as instructor, he was occupied at Harvard with routine teaching of elementary courses in physical geography. He developed during this time an original course in Oceanography, which was given for three years to Harvard classes.

His summers were always spent in original field work, which was productive of valuable publications. In 1898 he travelled across Russia with a party of geologists of the International Congress. He made special studies in the Caucasus mountains, and was privileged to spend some days with Sir John Murray in oceanographic work on the Black Sea. Three papers were published as a result of this journey, dealing with “the Caucasus,” the “Russo-Siberian Plain,” and “Palestine as illustrating Geological and Geographical Controls.” The summer of 1899 was given to a study of Nova Scotia, which resulted in a bulletin entitled “The Physiography of Acadia.” In 1900 Professor Daly accompanied Professor Delabarre, of Brown University,

as geologist in the latter's expedition to the north-east coast of Labrador, and a geological report of this reconnaissance was published by the Museum in Cambridge.

In June, 1901, Dr. Daly resigned his position in the university to become geologist on the Canadian Commission appointed to determine the boundary between the United States and Canada. He has since become widely known for his writings on the "Mechanics of Igneous Intrusion." His theory is, in brief, that deep-seated igneous magmas originate in a basic magma of uniform composition analogous to basalt, or gabbro. This magma, on rising, stops its way through overlying rocks, and assimilates the materials stopped out. The process of assimilation, aided by internal differentiation, produces the many varieties of composition observed in nature, from granite to gabbro or from rhyolite to basalt. As a strong champion of "assimilation" in geology, he has held a unique place among American petrologists, who have mostly been under the influence of the German and Norwegian "differentiation" schools of thought, in contrast to the French, which inclines toward extreme "assimilation." Daly, however, has adopted a middle course, based on his own examination of many hundred square miles of rock. While he is thoroughly trained in the microscopical and chemical methods of the petrographer, his reasoning is based primarily on what the field shows as to the physical relations of one rock body to another. In this he has held fast to the broad principles taught by Dr. Shaler, and has not allowed himself to be warped into merely narrow laboratory methods, which by themselves are fatal to a strong grasp of the meaning of the earth's crust.

Professor Daly's most important publications, besides those already mentioned, have appeared generally in the *Journal of Geology* and in the *American Journal of Science*.

They deal with "the classification of igneous intrusive bodies," "sections in the Cascade Mountains," "Ascutney Mountain, Vermont," "the porphyritic gneiss of New Hampshire," "the accordance of summit levels," and "the limeless ocean of pre-Cambrian time." He published two mineralogical papers of fundamental importance in the Proceedings of the American Academy in 1899. These were republished in French by the Mineralogical Society of France. They were the product of two years of work in foreign laboratories on the optical characters and etch figures of the amphiboles and pyroxenes.

T. A. JAGGAR, JR.

THE TECHNOLOGY EXPEDITION TO THE ALEUTIAN ISLANDS

Dr. Daly's coming to Boston is part of a movement at the Institute to establish a Research Laboratory of Physical Geology. Funds for the purchase, installation, and maintenance of seismographic apparatus have been subscribed. The laboratory will deal with the engineering problems of earthquake and volcano lands, with direct measurement and record of earth movements and processes, and with exploration directed to the same ends. It is hoped that a substantial fund to maintain the laboratory for ten years will soon be assured, and that this money will come from citizens of Boston.

The research work of the laboratory will be begun by an expedition leaving Seattle in April, 1907, to explore the Aleutian Islands. This exploration is financed by Boston business men. The scientific party will number six or seven, and will be led by Professor Jaggard as geologist. Professor H. V. Gummere, head of the Department of Mathematics at the Drexel Institute in Philadelphia, will be astronomer to the expedition, and will have the direction of magnetic work. Other members of the scientific staff are Professor A. S. Eakle, of the University of California, as mineralogist, and there will be a physician and two or three student assistants. Messrs. D. B. Myers and H. P. Sweeny, of the class of '08 in Course III., have already been selected as members of the party. The main object of the scientific work will be a study of Aleutian volcanoes, and the evidences of seismic activity shown by elevated or depressed shore-lines. Some attention will be given to magnetism, to determine local disturbances along one of the longest volcanic chains in the world. Measurements will be made with the land dip-circle, compass, and transit to determine variation, dip, and intensity.

Travel will be by auxiliary schooner from Unalaska to Attu and return. There are fifty-nine volcanoes reported in the entire

chain, many of which are unknown and unnamed. They range in elevation from four to nine thousand feet or more. Many of them have a record of activity. The volcano of Akutan near Dutch Harbor was reported active in March, 1907, and in 1906 a new extension of Bogoslof was visited by officers of the revenue cutter "Perry." This had been built up by explosions from beneath the waters of the sea during recent activity. As these volcanoes are all in United States territory, there is here an extraordinary opportunity for Americans to make a start in scientific volcanology. It is hoped the United States government will eventually add volcanometric and seismometric apparatus to stations of the Weather Bureau favorably situated for the purpose. Such measurements and records should eventually serve to protect human life and property. There is no place better suited to promote the invention and construction of reliable apparatus and the development of scientific methods of work along the lines suggested than the Massachusetts Institute of Technology.

GENERAL INSTITUTE NEWS

THE CORPORATION

A stated meeting of the Corporation was held on the afternoon of Wednesday, March 13. Five names having been presented by the Alumni Association through the Nominating Committee, and these names, in accordance with the By-laws, having been submitted in print two weeks in advance of the meeting, the Corporation by ballot elected the following term members, each to serve until 1912: George W. Kittredge, '77; Frank G. Stantial, '79; and George E. Hale, '90.

Reports were presented from the visiting committees on the Departments of Mechanical Engineering and Applied Mechanics and the Department of Modern Languages and English.

The following appointments presented by the Executive Committee were confirmed: beginning Oct. 1, 1907, Professor Reginald Aldworth Daly, A.M. and Ph.D., as Professor of Physical Geology; and Henry Louis Jackson, '05, Course V., as Instructor in Inorganic Chemistry for the rest of the year, to take the place of Mr. Rolfe who has been granted leave of absence for the remainder of the year.

The following memorial upon the late Samuel Cabot, prepared by Charles C. Jackson, was, in his absence, read by the President. The resolutions were unanimously adopted, and it was voted that they be spread upon the records.

SAMUEL CABOT

It is well worth while to set down upon the records some intimation of the quality and achievement of a man who, in his seventeen years of connection with the Corporation, has been of such essential service as has Samuel Cabot.

He was born Feb. 18, 1850. His parents were of our strong New England stock, whose traits persist from generation to generation, and who have given to the service of the community a succession of doctors, lawyers, and merchants of high purpose and attainment. His father was Dr. Samuel Cabot,

a man of large scientific attainment as a physician, surgeon, and ornithologist. From him especially Mr. Cabot doubtless derived his powers of close observation and shrewd deduction. His mother was Hannah Lowell Jackson, daughter of the Patrick Tracy Jackson who built the first Merrimack River Dam, when such an undertaking was far more difficult than it is now, and who with Francis Cabot Lowell started the manufacture of textiles at Lowell. Both parents were notably warm-hearted and philanthropic, and exerted themselves greatly to promote the abolition of negro slavery.

In 1866 Mr. Cabot left the Boston Latin School, and took the four years' course at the Institute. In 1870 he became chemist of the Merrimack Manufacturing Company at Lowell. In 1873 he left this position, and spent a year at Zürich, studying under Professor Emil Kopp, with whom he formed a warm friendship. On returning to America, he tried unsuccessfully to introduce a new chemical process, and then served a short apprenticeship in the office of his uncle, Colonel Henry Lee. In 1877 he and Mr. Nourse formed a partnership, and purchased a factory for making lamp-black and ammonia in Chelsea. In 1878 he bought his partner's interest, and from that time until his death he devoted himself eagerly to perfecting his plant and to the investigation of the innumerable problems of industrial chemistry which suggested themselves to his ever-active mind.

His broad view of business requirements, as well as the quick sympathy which other people's difficulties always awakened in him, led him twenty years ago to devise and put in operation a remarkably successful system of profit-sharing which he administered with that wisdom and kindness which played so large a part in his nature.

In his life of experimenting he made inventions of great usefulness. His use of creosote oil as a basis for shingle stains was the foundation of a new and important branch of manufacture, and owed its extraordinary success to the thoroughness of his methods and his exceptional artistic sense. He discovered that a thin layer of eel-grass quilted between sheets of asbestos paper had extraordinary properties as a non-conductor of sound and heat, and was practically indestructible. He invented and prepared a cheap and efficacious disinfectant and detergent now in general use. In these and other branches of manufacture his originality and technical thoroughness led to remarkable success.

It is unusual to find a man so deeply engaged in business as Mr. Cabot, who, nevertheless, had so much leisure to devote to other interests. The Institute was very dear to him. Fourteen years ago he was appointed chairman of the Committee on the Chemical Department, and he was in-

strumental in bringing Professor Lunge from Europe to examine it. Our President says he "knew his department" to a very unusual degree, and on several occasions he helped it with money.

He had a profound belief in the importance of physical health to all other vigor, and, as a member of the Advisory Council in Athletics, he took great interest in all the students' sports. He gave a tract of land and twenty thousand dollars in money toward the purchase of more land for the athletic purposes of the Institute, and he gave his house in Brookline to be used as a dormitory. He established a fund for an annual prize for the greatest improvement in athletics, and gave a silver cup on which the names of the victors were annually inscribed. But beyond all this was the importance of his influence in maintaining a high ideal in sports.

His death was a great misfortune to the public, and especially to us, for he was contemplating one or two important plans for the students' benefit, and would doubtless have executed them.

Although he had good constructive faculty, and although his daily occupation was that of business, the predominant cast of his mind was scientific. He had the scientific man's capacity for wondering at the simplest things and for constantly using his imagination. He had, moreover, a strong discriminating taste for fine pictures and an accurate knowledge of the literature and history of the Elizabethan period. But the traits which endeared him so greatly to us were the possession of high standards with which compromise was impossible, a high disdain for meanness, a chivalric wrath, and a fearlessness in thought and speech. This latter characteristic led him to condemn harmful persons and things very freely; but he was never suspected of low motives, and the fundamental gentleness and generosity of his nature were such that he left no enemy.

Resolved, That through the death of Samuel Cabot the Massachusetts Institute of Technology has lost a counsellor in whose wisdom, high-mindedness, and devotion it has long been accustomed to place its confidence, and to whose high example and far-seeing generosity it owes the better fulfilment of the purposes for which the Institute was founded.

ALEXANDER S. WHEELER

By the death of Mr. Wheeler on April 13, at the age of eighty-seven years, the Institute loses one of its most devoted friends. An extended notice of Mr. Wheeler's services to Technology will appear in the next number of the REVIEW.

THE FACULTY

Professor Lanza, head of the Department of Mechanical Engineering, has recently been decorated by the King of Italy. For scientific activity he has been made a Knight of the Order of St. Maurice and St. Lazarus. The Order of St. Maurice was founded in the fifteenth century, while the Order of St. Lazarus was established in the eleventh century. The two were united into one order in the sixteenth century.

By the rules of 1868 this order rewards distinguished merit acquired in civil and military careers, in sciences, in arts, in commerce, and in industries.

Notice of the appointment was sent to the Italian ambassador at Washington, Baron Meyer des Planches, by the Italian Minister of Foreign Affairs, and then to the Italian consul at Boston, Baron Gustavo Tosti, who presented it to Professor Lanza, together with the emblem. This emblem, which is worn on a green ribbon, is the three-leaved cross of St. Maurice, enamelled with white and placed over the bifurcated green cross, the ancient insignia of the Order of St. Lazarus.

Professor Lanza was born in Boston in 1848, the son of Gaetano (born in Italy) and Mary Ann (Paddock) Lanza. He is a graduate of the University of Virginia, where he was for two years an Assistant Instructor in Mathematics. In 1871 he was appointed an instructor at the Institute, and in 1873 made a member of the Faculty. He has been in charge of the Department of Mechanical Engineering since 1883.

At a recent meeting it was voted that after this year the spring vacation be the first half or the last half of the week in which the 19th of April occurs, according as the 19th should fall in the former or the latter.

On the report of a sub-committee appointed to consider the question of the substitution of Spanish or Italian for French or German, it was voted that it is not necessary or expedient to make any general changes in the entrance examinations in languages, but

that, whenever adequate reasons are presented, substitutions may be allowed upon authority of the Committee on Petitions.

At the first meeting of the National Society for the Promotion of Industrial Education, organized November 16, Dr. Pritchett was elected president. The object of the society is to bring to public attention the importance of industrial education as a factor in the industrial and educational development of the United States. Charles R. Richards, '85, is the secretary.

Dr. Pritchett went, about February 1, to New Orleans with a party, and embarked on one of the boats of the United Fruit Company, fitted especially for this trip, which included Central America and the West Indies.

A revised edition of Professor Osborne's "Differential and Integral Calculus" has recently appeared. The old book has been rearranged and considerably enlarged. Professor George has prepared a new chapter on the Integration of Rational Functions, and Professors Tyler and Woods are also given credit for sharing in the work.

Professor Osborne has added a chapter on Series in the "Differential Calculus," and one on the simple applications of Integral Calculus. In both branches many examples illustrating applications to mechanics and physics have been added.

Professor Talbot spoke on Mendeleeff's work and its importance to present-day chemistry before the New England section of the American Chemical Society on March 29. The occasion was the seventy-fifth regular meeting of the society.

At the Chemists' Club, New York City, Professor Prescott lectured, March 9, before the American Chemical Society on "Applications of Bacteriology to Industrial Chemistry."

COURSES II. AND XIII.

The Faculty has adopted a considerable revision of the courses in Mechanical Engineering and Naval Architecture. By these changes one of the two modern languages formerly required is omitted. Applied Mechanics is brought back into the second term of the second year, and the allotted time for the entire course is

somewhat increased to allow more opportunity for recitation. The time allotment for the course in Steam Engineering is considerably increased, to give opportunity to study the principles of the modern gas engine and steam turbine. In Course II. there has been added a course in Power Plant Design. Sixty hours of the seven hundred and twenty released have been added to the course in English and History of the second year.

GIFT

Another gift of \$5,000 has been received by the Institute for the maintenance of the Sanitary Research and Sewage Experimental Station. This station was founded in 1903, by a gift of \$5,000 from some person who has remained to this day unknown to the authorities of the Institute. Each year a check for \$5,000 has been received from the anonymous donor for the maintenance of the laboratory.

CAPS AND GOWNS

At a meeting of the Faculty held February 21 a vote was passed expressing disapprobation of the wearing of Caps and Gowns by the graduating class. In its last analysis the reason given for the action is that there is a lack of unanimity of opinion regarding the matter among those who have an interest in the subject.

This lack of unanimity of opinion is evident not only in the Faculty and in the Senior Class, but also in the other three classes and in the alumni. There are factions in each group of men, and there is not enough unanimity of opinion to assure the Faculty that graduation with Caps and Gowns would be a serious affair and would be continued by the other classes.

THE BEAUX-ARTS

Three Technology men passed the examinations given by the architectural department of the École des Beaux-Arts out of a large number of candidates. These men are William H. Crowell, '06,

Charles G. Loring, '06, and Paul F. Mann, '06, and were the only Tech men taking the examinations.

The splendid work of these men is better appreciated when the figures and conditions of the examinations are understood. There were seventy-eight foreign students taking the examinations, of whom only eleven passed. This number was divided into nationalities,—one Italian, one Roumanian, two Swiss, and eight Americans. Of the latter, one was from Cornell, two from Harvard, one from University of Pennsylvania, one with a travelling scholarship outside of college, and three Tech men. There were six Columbia men failed.

The examinations are difficult, there being only a limited number of foreigners taken in, and the competition is always keen. To add to the difficulties, many of the examinations are oral, and all are in the French language, making it very hard for an American in competing with the Latin races.

Crowell attended the Institute for two years, taking a special course. He won the Rotch travelling scholarship in 1905, and has been abroad since. He is known in the architectural department as a strong draughtsman, and his design for the scholarship, of an American Salon, was given very favorable comment in the architectural journals. He is married, and his home is in Boston.

Loring was graduated from the Institute with the class of '06, his thesis being a design for a sanatorium. He came to the Institute with a degree from Harvard. Mann was a member of the same class, but did not graduate from the Institute. He received a Bachelor's degree from Yale.

INSTRUCTORS' CLUB

The Instructors' Club dined at the Union on Feb. 14th, with guests from the Faculty and with Mr. James P. Munroe of the Corporation as speaker of the evening. Mr. Munroe's address on "The Relations between College Trustees and College Teachers" was followed by general discussion, especially of the proposed tutorial or preceptorial system, and how far it might be possible and profitable at Tech.

President Pritchett was the speaker at the dinner of the Instructors' Club held at the Union March 26. He told of his trip to Jamaica, Panama, and Porto Rico on one of the United Fruit Company's steamers.

TECHNOLOGY EMPLOYEES' MUTUAL BENEFIT ASSOCIATION

The association held a smoker at the Union January 31, with forty-two present. Professor Wendell, Mr. Blachstein, and Mr. Rand were the guests. A quartet from the Banjo Club, composed of Gerrish, '08, Sharman, '08, McGinniss, '08, and Sharp, '09, gave a musical program. The officers of the association are E. Edwards, president; F. W. Perkins, vice-president; F. G. Hartwell, secretary; and W. F. Wilton, treasurer.

NOTES

A series of lectures on Radio-activity and the Conduction of Electricity through Gases is being given by Professor Cross on Monday afternoons. These lectures are of a purely experimental character, and there will be no examination. The series is open to second, third, and fourth year students.

Mr. M. C. Whitaker, general superintendent of the Welsbach Company, gave a series of three talks on March 27-29, at 4.15 P.M., in 23 Walker. These talks were on "Factory Organization," "Cost Keeping and Accounting," and "Employer and Employee."

The investigations of the purification of Boston sewage made in the Sanitary Research Laboratory and Sewage Experiment Station of the Institute have been published as a public document by order of Congress. It contains a history of the sewage-disposal problem by C.-E. A. Winslow and Earle B. Phelps.

The Carnegie Institution has renewed its grant of \$2,000 to Professor A. A. Noyes, of the Physical Chemistry Department.

DEPARTMENT NOTES

MINING ENGINEERING AND METALLURGY

In the department of mining and metallurgy the new room for metallography is now equipped with lantern and microscope for the examination of polished metallic surfaces and a galvanometer for measuring resistances. This laboratory has been provided with a steam pipe around the floor for keeping the cases dry and warming the room, and the room is ventilated by an electric fan.

The new Rowand Wetherell magnet has been installed, and is now working in a very satisfactory way for the separation of black sands and any other mineral mixtures which may need it.

The new glass table has been installed, and two of the students are making their thesis upon it, with the idea of measuring the water quantities and the slopes most advantageous for treating various grades of sand made by classifier for the purpose of separating quartz from galena.

Professor Richards's new pulsator has just been installed, and experiments upon it are now in progress. It appears to have immense capacity for treating sands, and the various difficulties that have been met with in adjusting and controlling it are being one by one met and overcome. Two students are taking a thesis on this.

In regard to graduates of the department, Professor F. H. Sexton, of Dalhousie College, Halifax, has just been chosen to be director of technical education and principal of the Central College of the Nova Scotia Institute of Technology in Halifax.

Professor Sexton has proved such an efficient and intelligent worker in his department of mining engineering and metallurgy at Dalhousie that he has won the confidence of the people of Halifax, as well as of the Nova Scotia government.

CIVIL ENGINEERING

Notice has already been given in the REVIEW of the fact that Professor Sedgwick and Mr. John R. Freeman, one of our alumni,

were members of the Expert Commission which considered last summer the sanitary problem caused by the location of the new line of the Chicago, Milwaukee & St. Paul Railroad through the watershed supplying the city of Seattle with water. The commission recommended the construction of some works to protect the water supply from pollution due to trains, and the work is now being carried on under the direction of one of our graduates; namely, Professor W. J. Roberts, class of 1891, now professor of civil engineering at the State College at Washington.

Professors Swain and Allen were in New York the first of the month in connection with the recent accident on the New York Central Railroad, having been sent for by the Railroad Company to look into the technical matters relating to the accident. Professor Swain appeared and testified before the coroner's jury, the grand jury, and the Railroad Commission.

MECHANICAL ENGINEERING

(Titles of Theses, 1907)

Arnold, A. B.	}	Design of a Gas Power Plant.
Labbé, A. G.		
Baker, J. M.		A Test on an Air Brake Rack.
Berliner, E. M.		A Determination of the Pressure Temperature Diagram of the Saturated Vapor of Completely Denatured Alcohol.
Bigelow, W. W.	}	An Investigation of the Friction Loss in the Nozzles of a Steam Turbine.
Hanford, W. G.		
Boles, E. D.	}	Investigation of Locomotive Springs.
Snow, E. B., Jr.		
Bowen, C. A.	}	An Investigation of the "Slip" and "Creep" in a 350 H. P. Rope Drive.
Jealous, A. R.		
Cutten, L. H.		Design of a Heating and Ventilating System for a High School Building.
Denmark, C. R.	}	Performance of Ventilating Fans.
Mahar, J. T.		

- | | |
|--------------------|--|
| Dickson, V. H. | Efficiency of Cast Iron Indirect Radiators. |
| Dodge, P. | } Variation in Angular Velocity of Reciprocating Engines during one Revolution. |
| Richardson, E. C. | |
| Eaton, C. A. | } Tests on Cast Iron. |
| Thomas, J. J. | |
| Evans, E. C. | The Effect of Freezing and Absorption on Fire Brick. |
| Fales, O. G. | } Stationary Test of a White Steam Automobile. |
| Norton, G. R. | |
| Fellows, J. H. | An Investigation of Air Brakes. |
| Freedman, L. A. | } An Investigation upon a Gas Producer. |
| Wetmore, L. | |
| Kelly, E. F. | } Duty Test on 72,000,000 Gallon Leavitt Pumping Engine of the Metropolitan Sewage System. |
| Kudlich, R. H. | |
| Keyes, R. E. | } An Investigation of the Effect of Different Percentages of Water and Cement in Crusher Dust Mortar. |
| Lawton, J. T., Jr. | |
| Lightner, M. T. | Concrete Mixers, with Special Reference to the Effect of Violent Mixing on the Compressive Strength of Concrete. |
| Luce, B. P. | Speed Losses in Successive Counter-shaft Drives. |
| Lucey, W. S. | } Subway Ventilation. |
| Nicholl, J. S. | |
| Mathesius, A. P. | Coefficients of Flow for Narrow Wiers with High Heads, Full Contraction. |
| Middleton, N. A. | Test on Taylor Gas Producer Plant at Boston Elevated Railway Company Power Station in Medford, Mass. |
| Miller, A. | } A Study of the Heating and Ventilating System of the New Christian Science Temple in Boston. |
| Ruff, D. C. | |
| Miller, S. R. | Investigation and Comparison of the Different Methods of Vacuum Carpet Cleaning. |

Moller, K.	}	Test of 350 K. W. Koerting 2-cycle Double-acting Gas Engine of the Boston Elevated Railroad Company.
Robbins, D. G.		
Nichols, B.		Test of a Power Plant at Waltham.
Nutter, C. W.		An Investigation of the Effect of Varying the Cutting Speed and the Feed on a Saw Cutting-off Machine.
Pope, A.		Boiler Tests with Peat as a Fuel.
Rambo, M.	}	A Comparative Road Test of a Superheating and a Non-superheating Locomotive.
Thayer, R. E.		
Randall, J. R.	}	A Study of the Stresses and Strains in Reinforced Concrete Beams.
Rich, E.		
Rayner, W. P.		The Effect of the CO ₂ left in the Clearance Space of a Gas Engine, upon the Explosive Force, Time of Exploding, and the Mean Effective Pressure obtained.
Ripley, F., Jr.	}	Radiation Efficiencies of Air-cooled Engine Cylinders.
Squire, E. H.		
Rockwell, S. E.	}	Design of a Testing Machine for Subjecting Riveted Joints to Repeated Stress and an Investigation of the Effects of such Stress upon 2 Double-riveted Lap Joints.
Webber, P. B.		
Small, G.	}	Wind Pressure on Curved Surfaces.
Turnbull, W. F.		
Terrell, H. A.		The Effect of Superheated Steam on Cast Iron.
Udale, S. M.		Ozone Generators.
Wilkins, H. S.		Test of a Steam Power Plant.

ARCHITECTURE

The final awards in the recent competition among the fourth-year architects for the two \$50 prizes offered by the Boston Society of Architects were made in March. Winsor Soule and Ernest F. Lewis were tied for the first prize for regular students, while Andrew N. Rebori won the prize for special students. Thirty-one drawings

were handed in. The problem was "A Monumental Entrance for an American Embassy in a European Capital."

CHEMISTRY AND CHEMICAL ENGINEERING

The instruction in inorganic chemistry of the first year has been modified for the present term, with a view to adapting the work somewhat more to the needs of the individual and to avoiding a slight duplication of instruction in the second year. The class is divided into two large sections, based upon the continuance or non-continuance of chemical subjects beyond the first year, as determined by the student's choice of a professional course. The lecture and class-room instruction of the two sections is so differentiated that in the case of the students in the engineering courses without chemistry, particular stress is laid upon those phases of chemistry which bear directly upon an engineer's experience, while in the case of the remainder of the class the subject is treated in a somewhat more detailed fashion for the benefit of later work in the same field. In the laboratory work a still wider distinction is made. For the student whose chemical experience will terminate with the first year the laboratory work is based on qualitative analysis, as in recent years. For other students the laboratory practice is founded upon a series of inorganic preparations, carefully selected to represent particular principles or noteworthy examples drawn from applied chemistry. The purpose of the course is mainly to acquaint the student with the chemistry of the metallic elements through the processes of manufacture, or purification, of materials so selected as to comprise representatives of the common metals, and less attention is, therefore, paid to either the quantity or quality of the product produced than to the understanding of the chemistry involved. The variety of preparations offered exceeds the number which any one student can be expected to complete, and the assignments vary with different students. Each student is expected to know something of the work done by his neighbor if it differs from his own. It is hoped that in this way the student will obtain a broader knowledge of inorganic chemistry than formerly, and will be in a better position

to undertake the work in qualitative analysis at the beginning of the second year, thus avoiding what has previously appeared to be a necessary review at the beginning of that year of some of the work done in the first year. It is too early to attempt to forecast the results of this change, but the prospect appears thus far to be bright.

The distribution of the work of the Department in portions of four buildings makes it difficult, as has often been emphasized, for the members of the staff to learn what their colleagues are doing. With a view to meeting this difficulty in some measure, and also to promoting desirable discussion of methods of instruction, a series of conferences have been arranged for the present term, which are attended by all members of the instructing staff. At each conference the member in charge of a branch of the department states the point of view from which instruction under his care is given, and gives a general notion of the methods employed, the talks being followed by a general informal discussion. At the first of these conferences Professors Talbot and Pope discussed the work of the first year, at the second Professor Fay spoke of the teaching of Analytical Chemistry, and at succeeding conferences it is expected that Professor Noyes will explain the methods of instruction in the recently extended class-room and laboratory work in Theoretical Chemistry, Professors Walker and Thorp the work in Industrial Chemistry, and Professors Moore and Mulliken the instruction in Organic Chemistry.

The students of Course X. are to have a short course in Industrial Water Analysis, to give a general idea of the problems a manufacturer has to meet in different parts of the country. Through the courtesy of the Hydrographer of the United States Geological Survey and of the Director of the Water Survey of the State of Illinois, twenty or more samples from Iowa, Ohio, Arkansas, Illinois, and Georgia have been obtained as typical waters. These added to as many more samples from the eastern Appalachians will afford an excellent opportunity to study characteristic features.

Students in the option in Heating and Ventilation of Course II. have in hand some thesis work involving air-testing problems, and

those in the course of Air Analysis, Course XI., are carrying on a study of the condition of the air in school-houses.

As president of the Boston branch of the Collegiate Alumnae, which has invited the National Association to hold its quarter-centennial in Boston next November, Mrs. Richards addressed the New York and Washington branches in the January vacation, and also gave a course of six lectures at Teachers' College, Columbia University. She also spoke twice in Baltimore on "The Cost of Living" and "The Living Wage."

Mrs. Richards has a section in Social Economics at the Jamestown Exposition, for the Mary Lowell Stone Exhibit. Miss Stone was a student at the Institute in 1876-78. Mrs. Richards will also present, at its annual meeting, the report of the examiners having in charge the award of the \$1,000 offered by the Naples Table Association. She is chairman of the committee.

Professor Fay has recently given a talk before the Engineers' Club of the General Electric Company at Lynn on the "Applications of Metallography." Professor Talbot spoke before the Worcester Chemical Society and also before the Chemical Society of the Institute on "Some Modifications of Old Notions suggested by Recent Investigations." Professor Walker talked to the Unitarian Club at Melrose on "The Pure Food Laws."

Professor Talbot was elected vice-president and chairman of Section C of the American Association for the Advancement of Science at the New York meeting in December, and a member of the council to represent the section at that meeting.

Mr. G. W. Rolfe was given leave of absence early in February to go to Porto Rico, where, as last year, he will superintend the working up of a sugar crop, and will remain in Porto Rico until the close of the season. The department was able to secure the services of Mr. H. Louis Jackson (1905) to take Mr. Rolfe's place as instructor for the remainder of the year.

The Seniors in Chemical Engineering and Chemistry are now busy with thesis work, reports of some of which will probably be made later.

MODERN LANGUAGES

A crying need of the language-teaching profession, especially in technical schools, has been met by the appearance from the press of Silver, Burdett & Co. of "A Scientific French Reader," by Francis Harold Dike, instructor of French at the Institute. This work has been adopted for use in the Technology courses in intermediate French.

Professor Vogel and Dr. Kurrelmeyer are writing an English-German and German-English Dictionary for the use of technical students and engineers. It is to contain popular as well as technical terms of current use at the present day. The authors are selecting the terms for definition from recognized text-books and scientific and popular periodicals.

THE UNDERGRADUATES

PROFESSIONAL SOCIETIES

Mechanical Engineering Society.—At the meeting of the society February 12, at the Union, Charles Garrison, a former agent of the DeLaval Turbine Company, spoke on "Steam Turbines."

At the meeting held March 13, Mr. H. W. True, of the True Gas Power System, gave a talk on "Gas Engines and Gas Producers."

Mining Engineering Society.—At the meeting of the society February 15, J. H. Leavell, '07, and R. W. Wilson, '08, gave some account of their experiences in mining. Leavell spoke on quick-silver mining in Texas, and gave a brief outline of some of his work at Bingham. Wilson gave a short talk concerning the recruiting and care of laborers in the South African mines.

Professor Lodge gave an address February 26 before the society at the Union on "The Cobalt Mining District in Ontario, Canada."

Chemical Society.—Professor Henry P. Talbot gave an address on "The Modifications of Old Chemical Theories by Recent Discoveries" before the society on February 20. The chief topic of the speech was radium and the various experiments that have been made with it.

President W. E. Lummus, of the Commonwealth Manufacturing Company, gave a talk to the society March 20 at the Union.

Architectural Society.—Winthrop D. Parker, '95, member of the firm of Parker & Thomas, architects, addressed the society March 15 on "The Architectural Aspect of the Jamestown Exposition."

Geological Journal Club.—At a meeting of the club held March 1 M. W. Hayward, '06, reviewed a paper on "The Texture of Igneous Rocks" by Cross, Pierson, Iddings, and Washington. The authors present a scheme for classifying rocks with regard to "Crystallinity, Granularity, and Fabric," and propose a number of new technical terms to designate various modifications.

W. T. de Steigner reviewed a paper by M. R. Campbell on

"Certain Rock Folds in Arkansas." Professor Jaggar explained a number of difficult points to those present.

CLUBS

Civic Club.—At the meeting of the club March 8 the debate was opened by a short speech from the chair on the affirmative to the question, "*Resolved*, That suffrage should be restricted by an educational qualification." Discussion was informal, and at the close a unanimous vote was obtained for the affirmative.

Mr. Charles M. Jesup spoke on Americanism before the club March 15.

Catholic Club.—The club held its regular meeting March 20 in 16 Rogers. The chief feature of the evening was a talk by Rev. Father Leahy, of St. John's Seminary, on "Science and Revelation."

Esperanto Club.—The club held a meeting January 8. The beginners' class met under the direction of Mr. T. P. Ogden, while the advanced class were addressed by J. F. Twombly. Then the classes combined in a general meeting. Nothing but Esperanto was spoken.

Rifle Club.—At a meeting of the club held March 11 the following officers were elected for the year 1907: president, C. G. Kopitz, '09; vice-president, C. Kurtzman, '09; secretary, C. P. Shillaber, Jr., '09; treasurer, C. D. Jacobs, '09; executive officer, E. R. Jackson, '10.

British Empire Club.—The Harvard Canadian Club and the British Empire Association of Technology held a joint dinner on March 27 at the Hotel Nottingham. Professor De Sumichrast responded to the toast of Harvard, Dean Burton represented Technology, while Mr. Munroe, of Harvard, responded for the Canadians.

New York State Club.—March 7 the men from the Empire State met for the second time at dinner with over twenty men present.

Ohio State Club.—The club held its regular monthly dinner January 9 at the Union. Officers for the year were elected, as follows:

president, S. R. Miller, '07; vice-president, M. E. Allen, '08; secretary, N. Ransohoff, '10; treasurer, W. D. Spengler, '08.

The club held its second dinner of the year March 21 at the Union, about twenty members being present. President S. R. Miller, '07, presided.

Pennsylvania Club.—At an enthusiastic dinner of the club, March 25, the following officers were elected: president, D. B. Myers; vice-president, B. R. Fuller; secretary, S. N. McCain; treasurer, C. M. Steese. An executive committee was also elected, composed of R. W. G. Wint, G. M. Roads, and W. S. Woods.

Texas Club.—The first meeting of the club for this year was held on January 7. H. G. Pastoriza was elected president, and F. M. Heidelberg secretary-treasurer.

The club met at the Union March 2 to celebrate the first Texas holiday, the day on which Texas declared herself independent of Mexico.

Newton High School Club.—The club at a meeting March 29 elected officers and discussed the annual dinner. The new officers are: president, G. S. Gould, '07; vice-president, K. G. Chipman, '08; secretary-treasurer, H. E. Whitaker.

Y. M. C. A.

Rev. John Hopkins Denison, of the Central Congregational Church, gave a series of lectures before the Technology Christian Association, as follows: February 7, "A Month among the Cannibals of German New Guinea." This lecture was illustrated with lantern slides made from snapshots taken by himself. February 14, "Social and Moral Conditions on the East Side of New York City." February 21, "The Influence of Christ To-day."

Frank K. Sanders, D.D., former dean of the Yale Divinity School, addressed the Association, February 28, on the "Origin of the Inter-collegiate Y. M. C. A. Movement."

At the weekly meeting of the Association, March 14, Professor Winslow, of the Biological Department, spoke on "Motives." After the address the following results of the elections were an-

nounced: president, J. G. Reid, '08; vice-president, L. B. Hedge, '08; treasurer, J. N. Stephenson, '09; secretary, E. R. Jackson, '10.

Professor W. T. Sedgwick addressed the Association at the meeting of March 21, in Trinity Church, taking as his theme "The Essence of Christianity" as applied to the world of to-day.

Rev. James Alexander, of the First Presbyterian Church of Boston, delivered the first of a series of three talks to the Association March 28. His text was, "What think ye of Christ?" The following week he took as the subject of his talk, "Believe in God as an Asset," and the week after he spoke on "How We may Find Ourselves."

KOMMERS

The first *Kommers* of the second term, held February 16, under the auspices of the Civic Club, was well attended. Mr. Louis Frothingham gave an interesting and instructive talk on the Panama Canal.

There were about one hundred men present at the 1909 *Kommers*, March 9. After the usual singing the first speaker, Dean Burton, said that he was glad to see the *Kommers* prospering under the new management, and that he liked the idea of each class taking charge and inviting the others to come.

Mr. Eugene N. Foss spoke at the *Kommers*, March 16, on "The European Commercial Situation and its Relation and Importance to the United States." Last year Mr. Foss travelled through Europe for the purpose of studying these conditions.

The Freshman Hook Night, March 23, filled the Union with the largest crowd this year. Bursar Rand made the only speech of the evening.

Moorfield Storey, Esq., spoke at the *Kommers* March 30, his subject being "The Duties of Young Men as Citizens."

TECH SHOW

The play this year is a musical comedy, entitled "William, Willie, and Bill," and is of a much lighter nature than "The Freshman."

The scene is laid in a summer hotel, and the atmosphere is entirely collegiate. A number of new specialties will be introduced. In all there will be a cast of sixty, of which ten are principals.

The Colonial Theatre has been engaged for two matinée performances on the afternoons of April 25 and 26, the Malden Auditorium for the evening of April 26, and the Providence Opera House for the evening of April 27.

The author of the book, E. W. James, '07, will be unable to see his play produced, for he has accepted a civil service position in the Philippines.

The Tech Show poster this year is not to be the work of a professional, but of an undergraduate. S. R. T. Very, '07, was awarded the ten-dollar prize as best expressing the subject of the Show and as best from the point of view of the advertiser.

THE CLASSES

1907.—Voting for Senior Class Day marshals closed February 14, with the following results: first marshal, J. H. Leavell; second marshal, D. G. Robbins; third marshal, J. M. Frank.

BRIEF SUBMITTED TO THE FACULTY

Is the class of 1907 to wear Caps and Gowns at Graduation? Is the Massachusetts Institute of Technology to follow the recognized custom among all the leading educational institutions of the country to-day or is she to refuse? Is the man who refuses to wear evening dress to-day to be respected for his independence or is his narrowness to be deplored? Has not the Cap and Gown come to be equally the proper apparel for college graduation, as the dress suit for the evening function or the frock coat for the afternoon? Has not the Cap and Gown become entirely a recognition of scholarship *rather* than a relic of monasticism and a symbol of the old classical education? Are we not considering this matter from the standpoint of merit rather than from that of "copying" other institutions of learning?

It has been urged that the adoption of Cap and Gown would be contrary to traditions of the Institute. We ask what tradition we have in the Insti-

tute of which we violate the spirit. It is this lack of tradition that we are trying to remedy. Have not conditions entirely changed since the early days of the Institute, and has not Technology come to be looked upon as a college among the colleges rather than as a trade school? We would call to attention as a significant fact the marked changes, especially regarding Graduation exercises, which have taken place since the founding of the Institute. There has been a growing desire in the successive graduating classes for Caps and Gowns for the last ten years, which for the last four years has assumed serious proportions; and, in view of this fact, is it not reasonable to assume that this feeling will continue to grow?

It is impossible to deny that the progress of the Institute has been materially aided by the introduction of various college activities and ideas which have already served to exert a very broadening influence on undergraduate life. Why is it not wise to continue this policy? *Do we wish to admit that the education which Technology gives is not so broad and so liberal as that which may be obtained in other colleges?* Is it not wise for the Institute to recognize the value of public opinion as is shown in the following extract from an editorial which appeared in the Boston *Herald* of December 31, which is certainly worth our consideration?

CAPS AND GOWNS AT TECH

Will Tech Seniors wear Caps and Gowns? We do not know why they should not put on this last outward sign of academic recognition which they have won for their kind of training.

The education for which Dr. Eliot pleaded in the *Atlantic Monthly* in 1868 (and became Harvard's president in consequence) was the education which isn't necessarily presided over by a clergyman, and which recognizes more than one kind of knowledge. That plea has pretty nearly come to pass. Caps and Gowns by all means. Let the world know that it is as dignified to build a bridge as to dig up a Greek city.

We believe that three strong arguments in favor of the Cap and Gown are:—

First, Uniformity of Dress. *Second*, Democracy. *Third*, Economy.

First. Uniformity of dress not only adds a dignity to the occasion not attainable in any other way, but it gives a distinctive mark to the graduates.

Second. Since we feel that democracy is a cardinal doctrine at the Institute, we strive to attain it by providing a costume which is the plainest, simplest, and most democratic possible.

Third. There can be no question but what Caps and Gowns, which can

be obtained outright for from five to ten dollars or rented for two dollars, are much cheaper than any other outfit suitable for the occasion.

Feeling that the completion of Technology's course does deserve an exercise, we wish to make this exercise fitting to the occasion. We believe that this end can best be accomplished by the adoption of Caps and Gowns. We call attention to the fact that out of the twenty leading institutions, either wholly scientific or having scientific departments, to which letters have been sent, fifteen use the Cap and Gown. We invite your inspection of these letters, which will be turned over to the Faculty Committee. We have endeavored to obtain the opinion of the alumni, and, as far as we have succeeded, we find the sentiment is in favor. See also the expression of the class's desire for the adoption of Caps and Gowns, which, notwithstanding an unfortunately ambiguous wording of the question, showed a two to one vote in favor, in one of the largest polls of votes in the history of the class.

We, therefore, in the light of the foregoing statement, invite your careful consideration of this matter.

CLASS OF 1907.

As the thesis work of some of the Seniors, there started March 22 two seventy-two hour plant tests. Both are on electric power plants, one at Haverhill and the other at Waltham. Besides the Seniors who are running the tests, there are many Juniors and under-classmen who will also take part as assistants.

The Haverhill test was conducted by Whitney, Dean, Tylee, Frank, Pease, and Keeling, all '07.

The test on the Waltham plant was conducted by Macomber and McChesney, of the Electrical Department, and Packard and Nichols, of the Mechanical Department.

TECH SONG BOOK

At a meeting of the Senior Class last November a question was brought up as to the advisability and possibility of publishing a new edition of the book of Tech Songs. As a result of the discussion, a committee was appointed to look the matter up. This committee found that the first edition, published in 1903, contained many songs which were hardly sung at all, and that there were many songs which might well be included. Upon making a favorable report at a later class meeting, this committee was in-

structed to go ahead on the work of getting out a revised edition. Since then a contract has been made with the Oliver Ditson Company to publish a new edition, and it is expected that it will be issued by the time of the Commencement exercises and Alumni Reunion.

The contents of the book have undergone a complete revision at the hands of the committee. Twenty-four of the forty-nine songs in the first edition have been retained, and forty-six songs from various sources have been added, bringing the size of the new book above one hundred twenty pages, ten pages more than before.

Of the songs that have been added, twelve are distinctly Tech Songs. Five of these are used by permission of the management of the Tech Show. They are the most popular songs which have come out in the Tech Show during the past few years. Three more of these are songs written by Tech men, and the other four are adaptations of songs which are used, with suitable words, at many colleges.

The group of songs termed "Old Timers" by Mr. Bullard has been extensively added to. After looking over many college-song books, the committee selected twenty-one songs which seemed to be the most universally known, and the best liked wherever known. This number includes such songs as "Juanita," "Jingle Bells," "The Pope," etc.

A new departure has been made in the introduction of several patriotic songs and a number of representative songs of other colleges. This latter number includes a song representing each of nine colleges, such as "Fair Harvard," "Bright College Years," "Cornell Alma Mater," etc.

Such is the general outline of the contents of the revised edition of the Tech Song Book. The committee has undoubtedly made mistakes in the selection of songs, but it has tried to do its best. The Senior Class Day Committee has had enough confidence to order one hundred fifty copies to be given to the Tech Union as the class gift, and we trust that its reception among undergraduates and alumni may be equally warm.

DONALD G. ROBBINS, '07.

1908.—On March 2 the classes of 1898 and 1908 held a joint dinner at the Union. The ten years that separated the two classes were merged into a single delightful evening. The dinner was in the nature of an experiment, but it proved a signal success. Under the leadership of toastmasters, Winslow for '98 and Gerrish for '08, Technology spirit fused the two classes into an enthusiastic Tech-

nology unit. There were speeches from C.-E. A. Winslow, A. A. Packard, W. H. Godfrey, H. L. Coburn, V. W. Edgerly, and K. W. Waterson for 1898, and from H. T. Gerrish, G. T. Glover, and K. Vonnegut for 1908. Unqualifiedly, the dinner was a success, success enough to justify the belief that it was more than an experiment, more than a novelty, and that it will in time be recognized as the establishment of a custom. It is such customs as these that inspire alumni and undergraduates with their proverbial faith in the superiority of college years.

Technique, 1908, is about to go into print. We believe the book will do credit to the class, and also uphold the high standard set by previous editions. The competition for the cover design was won by Kurt Vonnegut, '08.

On Feb. 6, 1907, the Faculty voted that the spring recess this year be from Thursday noon, April 25, until the end of the week, but that next year it will be April 20, 21, and 22. Hereafter the spring recess in April will be the first half or the last half of the week in which the 19th occurs, according as the 19th shall fall in the former or the latter.

1909.—About a hundred men were present at the *Kommers* on Saturday evening, March 9. Dean Burton and Mr. Rand spoke, and the musical entertainment was provided by Kelly, R. H. Allen, and Jenkins, members of the class, besides two local vaudeville artists. Everybody had a fine time, and the evening was a great success.

The results of the elections for the 1909 *Technique* Electoral Committee were as follows: R. H. Allen, Belden, Bundy, Critchett, Dickerman, Emerson, Finnie, Flagg, Godfrey, Gram, Hutchinson, Jenkins, Keeney, Kellogg, W. J. Kelly, W. W. King, Koppitz, Kurtzmann, Miss Longyear, Lord, Miss Luscomb, Moses, Scharff, Taite, Whitaker.

The board as elected consists of: associate editors, M. R. Scharff, R. H. Allen, B. E. Hutchinson, R. M. Keeney; athletic editor, A. L. Moses; society editor, A. L. Dickerman; statisticians, W. W. King, C. J. Belden; business staff, C. G. Koppitz, J. H. Critchett, P. B. Lord, W. J. Kelly.

The editor-in-chief, business manager, treasurer, and secretary will be elected later by the board.

1910.—The class is making preparations for the baseball season, having elected John Avery, Jr., as manager. J. M. Townsend has been re-elected manager of next year's football team. On the 23d of March the class had an entertainment at the Union called "Hook Night." A number of the students took part, and souvenirs were given to each member of the class.

The annual Prize Drill of the M. I. T. Corps of Cadets will be held on the evening of May 17.

ATHLETICS

N. E. I. A. A.

In spite of the fact that it made the best offer that the association had ever received, the New England Intercollegiate Athletic Association, at the annual meeting held February 16, decided that the meet should this year be held on the Worcester Oval, where, with one or two exceptions, it has been always held, up to last year.

B. A. A. GAMES

In spite of a serious mishap in the first relay, Technology defeated Holy Cross in the relay race at the Mechanics' Building, February 16, by half a lap.

Of the Tech men entered in the other events, R. H. Allen, '09, won the high jump with an actual jump of 5 feet $7\frac{1}{2}$ inches. His handicap of $5\frac{1}{2}$ inches enabled him to defeat H. A. Gidney, scratch, by three-quarters of an inch.

Six Tech men, Gould, '07, Fernstrom, '10, Gram, '09, Richards, '07, Todd, '08, and Moses, '09, ran in the 40-yard handicap dash, the first four winning their trial heats.

Other Tech men who competed were R. C. Albro, '07, in the 45-yards high hurdle race; H. H. Howland, '08, and C. J. Batchelder,

'08, in the mile run; G. H. Chapman, '07, in the 1000-yards run, and M. E. MacGregor, '07, in the 2-mile run.

BASKET-BALL TEAM

With a record of two close games with West Point and the College of the City of New York and a victory over the crack Brooklyn Polytechnic five, the team returned February 4 from its very successful trip to New York. The following men were sent: Manager Whitmore, Captain Kinnear, Nichols, '09, Bitler, '08, Pierce, '08, and Campbell, '09. Coach Schonthal accompanied the team. On January 30 the team met the College of the City of New York in New York, and after a close game was defeated by the score of 20 to 14. The following evening Tech defeated the star Brooklyn Polytechnic Institute team in a rough game.

On Friday evening a game was to have been played with the New York University Law School, but unfortunately turned out to be rather a fluke. After a disappointing contest the Institute five was badly defeated by a semi-professional team (only two members of which were Law School men) on a floor totally unsuited for basket ball.

On Saturday they journeyed up the Hudson to West Point, and in the afternoon played the cadets. The Tech five played a good game, and by consistent covering were able to hold the West Pointers down to a score of 19 to 13.

Owing to lack of facilities for practice, a general disinterestedness on the part of the student body, and mishaps to members of the team, the basket-ball season of '06-'07 has not been very successful.

The percentage of games won was small, but in many of the games Tech's opponents won by only a few points. Tech scored 302 points to 392 for opponents. Out of the seventeen games played, only three were won.

FENCING

Yale won the triangular fencing meet March 23 by taking twelve bouts, while Columbia finished second with 10 bouts, and Tech came last with 5 bouts. Tech was completely outclassed by both teams, and the Institute men could win only from three of the opponents, Byrne and Amend, of Columbia, Smith, of Yale.

At a meeting of the Intercollegiate Fencing Association March 31, Technology was elected to membership. The only opposition to the election was made by the Harvard representatives, who made a hard fight to keep the Institute from the association.

The Fencing Team has been endeavoring for a number of years to be admitted to the Intercollegiate Fencing Association, and until this year has always been voted down. Last year West Point opposed the election on the grounds that Technology was not a university, and that the association should be open only to universities.

As a precedent, it was pointed out that Technology had a team in the Intercollegiate Cross Country Association, but the application was rejected. Harvard, Cornell, and Columbia resigned from the old body, and together with the Institute formed a new league. This league went to pieces in a short time, and the three colleges rejoined the older association.

CROSS COUNTRY ASSOCIATION

At the meeting of the association held March 13 the following officers were elected: president, H. R. Callaway, '08; secretary-treasurer, R. Ellis, '09; manager, R. W. Ferris, '08; captain, H. H. Howland, '08; chase captain, J. N. Stephenson, '09.

HOCKEY

During the vacation the team played, besides minor games, two important intercollegiate games with Massachusetts teams. The team went out to Williamstown and defeated Williams College, 2 to 1, in a fast match.

The next day the team played Springfield Training School at Springfield, and were unable to score against the Training School seven. The score was 5 to 0.

TRACK TEAM

Spring training for track athletics began March 19.

The spring meet, or class games, will be held April 13, and following there are two dual meets and an intercollegiate meet at which Tech will be represented. On May 4 Tech has a dual meet with the University of Maine at Orono, Me. The delegation to it will be twenty-five men. The Brown meet, to be held at Tech Field, comes May 11.

The wind-up of the season will be at the New England intercollegiate meet at Worcester on May 24 and 25, in which Tech will be represented by about sixteen men.

THE GRADUATES

ASSOCIATION OF CLASS SECRETARIES OF THE M. I. T.

A special meeting of the Association of Class Secretaries was held at the Technology Club, Boston, on Friday evening, April 5, 1907, to consider plans for the annual Commencement celebration. The members dined together, as usual. The business meeting was called to order by the secretary at eight o'clock, and Professor C. F. Allen, '72, was chosen chairman of the meeting.

Following the reading of the minutes of the previous meeting (in November, 1906), which were approved, the meeting proceeded to discuss plans for this year's Commencement, which occurs on Tuesday, June 4.

Taking up the matter of spreads, which are held on the afternoon of Commencement Day, H. L. Coburn, '87, suggested that in place of individual class spreads all classes unite in a general spread at the Technology Club.

Everett Morss, '85, president of the Alumni Association, and J. F. Norris, president of the Technology Club, favored Mr. Coburn's suggestion, and upon motion of E. G. Thomas, '87, it was voted that the sense of the meeting was that a general spread of all the classes be held at the Technology Club, and that the expense be met from the profits of the Pop Concert.

Upon motion of I. W. Litchfield, '85, it was voted that the chairman appoint a committee of fifteen, including the president of the Alumni Association as chairman, to take full charge of all arrangements for Commencement. The chairman appointed the following committee: Everett Morss, '85 (chairman); J. F. Norris; H. L. Coburn, '87; C. F. Park, '92; L. W. Pickert, '93; J. A. Rockwell, '96; R. H. Stearns, '01; M. L. Emerson, '04; R. H. W. Lord, '05; G. DeW. Marcy, '05; Lawrence Allen, '07; Alexander Macomber, '07; Kurt Vonnegut, '08; A. G. Kellogg, '09; A. F. Glasier, '10.

L. W. Pickert, '93, for three years the chairman of the "Tech Night Pop Concert" Committee, spoke of matters in relation to the Pop Concert, and suggested that, in sending out information about the various Commencement activities, all notices from the classes, the Alumni Association, and the Commencement Celebration Committee, be mailed together from the alumni headquarters. Mr. Morss favored the idea, and suggested that the expense be divided between the Alumni Association and the class secretaries. After further discussion it was voted, upon motion of A. G. Robbins, '86, that the Commencement Celebration Committee join with the Alumni Association in sending out notices for Commencement, and that the expense of postage and mailing be divided between the Alumni Association and the Association of Class Secretaries.

E. H. Packard, '07, spoke of the progress of the work upon the new Tech Song Book, which is being revised and brought out by the Senior Class as its graduating gift to the Institute.

A report of the annual meeting of the North-western Association at Chicago on March 2d was given by Mr. Litchfield, who attended the meeting in company with Frederick P. Fish, Esq., of the Institute Corporation. Mr. Litchfield and Mr. Morss spoke of the need of sending representatives from the Institute to meetings of alumni in other cities, and Mr. Morss told of the work already done by the Alumni Association in this matter. Mr. Thomas thought it desirable that notices of meetings of each local alumni organization be sent to all such organizations, and asked that the Committee on Closer Relations consider the suggestion.

The secretary read a letter from the secretary of the class of '82 requesting a reservation of seats at the Tech Night Pop Concert for the ladies who were to attend the celebration of the twenty-fifth anniversary of that class. Several members who spoke on the subject believed it would add to the pleasure and popularity of the Pop Concert for classes who cared to do so (particularly classes observing some special anniversary) to make balcony reservations for their ladies. Upon motion of Mr. Coburn the letter from the class of '82 was referred to the Commencement Celebration Committee.

Mr. R. H. W. Lord, '05, brought up the subject of uniform

membership cards, which at present are issued by local alumni organizations to their members, and are used as cards of introduction to other organizations. Mr. Litchfield spoke of the need of sending out to Tech men generally, either through the class organizations or the Alumni Association, information concerning the various local Tech organizations, so that any Institute man, upon visiting a city where such organization exists, would know how to reach Tech men in that locality. The meeting adjourned at ten o'clock. Attendance, thirty-three.

FREDERIC H. FAY, '93, *Secretary*.

NORTH-WESTERN ASSOCIATION OF THE M. I. T.

The annual meeting of the North-western Association was held at the University Club, Chicago, on Saturday, March 2, at 6.30 P.M. The attendance was the largest that we have had for some years, and included men from Detroit, Cincinnati, and many other points at some distance from Chicago. The report of the secretary and treasurer showed the Association to be in a prosperous condition, and the average attendance at the meetings being larger shows greater interest on the part of the members. Officers for the ensuing year were elected, the result being as follows: J. T. Cheney, '03, president; E. M. Hagar, '93, first vice-president; A. W. Woodman, '90, secretary and treasurer. Executive Committee: R. E. Schmidt, '87; F. D. Chase, '00; Bernard Blum, '04. As there was no other business to come before the meeting, we adjourned to the dining-room. The dinner was truly typical of the Association, and the presence of Mr. Frederick P. Fish, "Ike" Litchfield, and Dugald C. Jackson, the new professor in the Electrical Engineering Department, added much to the occasion. Seventy-six members listened to the very interesting remarks of Mr. Fish, who gave the best insight into Institute affairs that has been given the Association for some time. His remarks covered the present, past, and future of the Institute, including in the latter a brief outline of the work that had been done by the committee in whose hands the choice of the new President lies.

Litchfield came to Chicago especially for this affair, and he was given a royal reception. His remarks were mostly reminiscences, and were heartily received.

The telephone investigation that was being conducted here enabled us to have Professor Jackson with us, and we were especially glad of the opportunity to show him the true Technology spirit.

Robinson, '84, emphasized in a most able way the duties that rested upon the shoulders of every Tech man, now that the merger question has been settled. Several telegrams were received from absent members, and there was music by an orchestra. Numerous songs and cheers during the evening made it most enjoyable.

JOHN T. CHENEY, '03, *Secretary*,
120 Wabash Avenue, Chicago, Ill.

THE TECHNOLOGY CLUB OF PHILADELPHIA

It has been felt for some time, among some of the members, that the club should have permanent quarters. At the last meeting a committee was appointed to solicit contributions and arrange for securing a suitable site, if the necessary financial assistance was forthcoming.

Dean Burton brings to the REVIEW the following report of the annual dinner held at the Hotel Flanders on April 4: "There were about thirty-five present at the dinner, and, in addition to the speakers who are down upon the program of the meeting, Professor Lanza spoke a few words. He was introduced as Sir Gaetano Lanza, and told about the excursion which he was taking with the Senior Mechanical Engineers to visit the Baldwin Locomotive Works at the invitation of Mr. Vauclain. The subjects taken up by the different speakers were: Major Cassius E. Gillette, chief engineer of the Bureau of Filtration, Philadelphia, 'The Panama Canal'; James K. Young, Ph.D., Dean of the Wharton School, University of Pennsylvania, 'The Business Man, the Financial Crisis, and the University'; Samuel M. Vauclain, superintendent of the Baldwin Locomotive Works, 'The Age Limit'; and Professor Alfred E.

Burton, dean of the Massachusetts Institute of Technology, 'Changes in the Student Life at the Institute during the Last Five Years.' Major Gillette's talk on the Panama Canal was especially interesting."

ROBERT H. BOOTH, '06, *Secretary*,
Linwood, Pa.

WASHINGTON SOCIETY OF THE M. I. T.

This society has adopted for the present year the plan of monthly meetings with informal dinners and smokers on the second Monday of each month, omitting the meeting formerly held on the fourth Monday of the month.

The year was begun auspiciously with a well-attended meeting on January 14. In the evening Mr. M. L. Fuller, '96, of the Geological Survey, gave a well-prepared talk on "Earthquakes," illustrated by lantern slides. The subject was treated scientifically with illustrations from the so-called New Madrid earthquake, a violent upheaval that had its centre in the Mississippi valley in the early part of the last century, and the more recent Charleston and San Francisco earthquakes. Of the three the first mentioned was stated to have been much the most severe and wide-spread, so that its effects can still be traced after nearly a hundred years, though it did not cause such great destruction of life and property as did the later ones, the country being then thinly settled.

There is believed to have been an important relation between the presentation of this subject before the society and the earthquake in Kingston, Jamaica, which occurred the same afternoon, and news of which came next day, though its exact nature has not yet been established.

At the meeting of February 11 Mr. William J. Rich, '84, a principal examiner in the United States Patent Office and ex-president of the society, gave a talk on "Patents and the Patent Office," in which an explanation was given of all the steps of procedure in obtaining a patent. The topics covered were, in brief, the preliminary search, the services of the attorney, the specification and drawing, the claims, the mode of examination in the office, amendments, ap-

peals to the Board of Examiners-in-Chief in cases of final rejection, appeals to the commissioner and the courts, and reissues. Some amusing examples of the "freak patents" that are occasionally taken out were also shown.

At the meeting of March 11 a programme of music on the Cecilian was enjoyed, played by Mr. F. F. Longley, '04. Among those present was Joseph B. Baker, '90, who has lately come from the fuel testing laboratory of the Geological Survey in St. Louis to the Washington offices of the Survey.

Other accessions to the society within a few months are: LeRoy E. Kern, '02, G. Curtis Noble, and Donald C. Bollard, all of the Supervising Architect's Office; and Dana N. Wood, '06, of the Geological Survey.

The following men have removed from Washington to other parts of the country: Frederick G. Clapp, '01, has gone to the Boston office of the Geological Survey; Frank O. Stetson, '88, has taken a position with Stone & Webster, Boston; Edwin F. Samuels, '99, and William I. Wyman, '00, have resigned from the Patent Office, the former taking a position with Stuart & Stuart, patent attorneys, Baltimore, and the latter having gone to New York.

On March 9 a change occurred in the government service that is of great interest to Technology men here by reason of the additional prominence it brings to one of their number whose work had already become well known. On that date the United States Reclamation Service, formerly a part of the Geological Survey, was made an independent bureau of the Interior Department, and Mr. Frederick H. Newell, '85, the chief engineer under the Survey, was appointed as director at the head of the new bureau. Highly complimentary notices of the new director were published in Washington papers at the time. At present the Reclamation Service has under way construction work involving the ultimate expenditure of \$40,000,000. Employment is being given to 10,000 persons, and the monthly expenditure is approximately \$1,000,000.

F. W. SWANTON, '90, *Secretary*,
1641 13th Street, N.W., Washington, D.C.

THE TECHNOLOGY CLUB OF THE MERRIMACK VALLEY

The annual meeting of the club was held in Lowell, Mass., on Friday evening, February 1, at the New American House. Dinner was served at one dollar per plate.

Preceding the dinner there was an election of officers, resulting as follows: president, R. A. Hale, Lawrence; vice-president, George A. Nelson, Lowell; member executive committee, John Alden, Lawrence.

The guest of the evening was Professor T. A. Jaggar, Jr., of the Institute, who spoke on "The Relation of the Engineer to Volcanoes and Earthquakes," illustrating his talk with many stereopticon views of Vesuvius, Mt. Pelée, La Soufrière, and the San Francisco earthquake. Professor Jaggar gave a detailed description of that delicate instrument, the seismograph, whereby the motions of the earth's crust are recorded.

Those present at the dinner were: Collins, '97, Bowers, '75, Hale, '77, Carney, '93, Stevens, '10, Coburn, '97, Lambert, '98, Morrill, '09, Bowen, '09, Morton, '04, Morrill, '07, Boyd, '97, Barker, '96, Brown, '77, Nelson, '77, Alden, '77, Atwood, '76, Faulkner, '76, Simpson, '90, Eastman, '88, Kimball, '86, Ball, '06, Perkins, '99, Perkins, '01, Booth, '02, Chalifoux, '02, Eames, '97, Hamblet, '88, Hildreth, '87, Hildreth, '85, Chase, '74, Towne, '78.

JOHN A. COLLINS, JR., '97, *Secretary*,
74 Saunders Street, Lawrence, Mass.

CINCINNATI M. I. T. CLUB

The annual meeting and dinner of the Cincinnati M. I. T. Club was held at the Hotel Sinton on Friday evening, March 22, 1907. Vice-President John A. Hildabolt presided. It proved to be a most enjoyable occasion for the twenty-four Tech men who were present. The guests of the evening were Professor Herman Schneider and Professor J. T. Faig, who are at the heads of the Courses in Civil and Mechanical Engineering, respectively, at the

University of Cincinnati. Dr. Thomas Evans introduced Professor Schneider, who described in a most interesting manner the workings of the Co-operative Course in Engineering established through his efforts at the University of Cincinnati. Students in mechanical, electrical, and chemical engineering spend one week at the University in study and the following week at work in some one of the various industrial plants within or near the city. The course is six years in length, and the money earned in the shops during half of the six years spent in this way, enables young men to obtain an excellent education and at the same time be self-supporting. The cordial co-operation of the manufacturers, who are much pleased with the results thus far obtained, together with the enthusiastic aid of the faculty and of the city authorities, has made a distinct success of this unique experiment in education. Professor Faig spoke of the peculiar advantages offered by Cincinnati for making such an experiment, especially in connection with industrial engineering. Mr. James B. Stanwood spoke from the standpoint of the manufacturer, and pointed out the great advantages to any industry which employed students being trained in this manner, and of the high character and quickened intelligence of those young men who had come under his observation.

A nominating committee appointed by Vice-President Hildabolt named the following members of the club as officers for the ensuing year: for president, John A. Hildabolt, class of '75; vice-president, Rudolph Tietig, class of '98; treasurer, William E. Brotherton, class of '73; secretary, J. W. Ellms, class of '93; for a member of the executive committee for one year, Fred. G. Garber, '03; for two years, Morten Carlisle, '90; and for three years, A. Senior Prince, '05. The above-named members were duly elected.

The minutes of the last meeting were read by the secretary, and were accepted. A vote of thanks was given Professors Schneider and Faig for their interesting remarks.

J. W. ELLMS, '93, *Secretary*,
E. Court and Martin Streets, Cincinnati, Ohio.

TECHNOLOGY CLUB OF HARTFORD

The Technology Club of Hartford held its annual meeting and dinner at the Hartford Club Saturday evening, February 9, the business meeting being held at six and the dinner at seven o'clock. The officers elected are: president, Henry Souther; vice-president, A. M. Holcombe; secretary and treasurer, George W. Baker.

Those present at the meeting were Howard A. Burdick, Charles Pettee, G. H. Gleason, A. M. Holcombe, Horace H. Ensworth, Henry Souther, George W. Baker, E. H. Lorenz, Clarence E. Whitney, F. C. Moore, Charles R. Nason, Henry A. Fiske, F. M. Blake, H. P. Maxim, and D. A. Richardson, all of Hartford, and C. P. Waterman, of Bristol.

Speeches followed the dinner, A. M. Holcombe being the toastmaster, and the addresses were by Frederick C. Moore, Henry Souther, H. A. Fiske, and H. P. Maxim. Mr. Souther called attention to the field open to Technology men in this city, and urged them to take a more active part in solving the scientific problems which confront the city.

Frederick C. Moore, superintendent of the Special Risk Department of the Hartford Fire Insurance Company, spoke briefly on the subject of "Fire Protection and Mill Construction," referring to the cardinal principles, and pointing out that the high reputation of mill construction was largely due to the fact that this type has generally been provided with the protection of automatic sprinklers.

Mr. Fiske took for his subject a quotation from the *Standard* of Boston, being the opinion expressed by Captain Sewall, of the corps of engineers of the United States army, who was detailed by the War Department to certify the reports made of the condition in cities by the engineers of the national board.

"Nothing is of more importance at the present moment than the protection of the congested value districts of modern cities from conflagration."

Mr. Fiske enlarged on the present deplorable conditions existing in many cities, pointing out the need of reform, it being a matter which affects us all to a greater or less extent. Technology men

are especially well fitted to grasp a subject of this kind, and, by concerted effort in the communities in which they reside, to be of great usefulness.

The club, which was formed in 1894, meets once a month in the Rathskeller of the Hotel Heublein, when papers of interest to the members are read and discussed.

GEORGE W. BAKER, '92, *Secretary*,
P.O. Box 983, Hartford, Conn.

A TECHNOLOGY GATHERING AT PANAMA

A very jolly and enthusiastic reunion of Technology graduates was held at the Tivoli Hotel, Panama, on the evening of February 12. The occasion was the visit of President Pritchett to the Canal Zone, and all the Tech men engaged in the various engineering departments of this great enterprise arranged to meet President Pritchett and renew the memories of Technology. About ten Tech graduates are employed on the Canal, nearly all of whom were present, and the meeting was one of great enthusiasm. It was a cheering sound to hear the familiar M. I. T. cheer in these tropical surroundings. Among the graduates present were: Frank A. Browne, Robert J. Lyons, Andrew L. Bell, all of the class of 1906; John H. Flynn, Jr., William P. Bixby, Clarence E. Gage, all of the class of 1905; Alexander S. Ackerman, of the class of 1903, and several others.

President Pritchett spent three days in examining the work in progress, and received from Chief Engineer Stevens every facility for obtaining a good view of what was going on. He expressed himself enthusiastically concerning the work which Mr. Stevens and his assistants are doing.

THE TECHNOLOGY CLUB

Since the annual meeting in October the following smoke talks and ladies' nights have been held at the club:—

On the second evening, October 18, Mr. T. H. Skinner (IV.), '92, addressed the club on the subject of "The Earthquake in San Francisco." He gave particular attention to the effects of the earth-

quake and the subsequent fire on steel structures, and the talk was well illustrated by many stereopticon slides. On November 19, a business meeting of the club was held, at which the method of electing members was changed to the effect that the names of all candidates for membership, after the usual approval by the Membership Committee and being posted on the bulletin board, shall be included in the notice to all members of the club, and the vote of the council on these names shall be by letter ballot monthly. On the occasion of this meeting Professor George E. Hale (VIII.), 90, gave an illustrated talk on "A New Mountain Observatory." On the evening of December 7, Professor Henry E. Crampton, of Columbia University, related the experiences of "A Naturalist in Tahiti." On the fifth evening of the season, December 21, a most interesting talk was given on "Alaska and its Resources," by ex-Governor John G. Brady, of Alaska. The speaker has spent many years of his life in that country, and he traced its history and development from Russian times to the present. His accounts of many incidents, together with a collection of curios and a large set of stereopticon slides, made real to the appreciative audience the story of Alaska. On the sixth evening and a ladies' night Señorita Carolina Holman Huidobro, with the aid of a beautiful collection of stereopticon slides, took the members on a trip to see "The Wonders and Marvels of Peru." Many of the members remembered the brilliant talk which Señorita Huidobro gave in 1903, and on the present occasion the "common room" was taxed to the limit. The second ladies' night was held February 19, when Mr. William Lyman Underwood gave an illustrated talk on "By-paths in Florida and Nassau." Again the "common room" was filled to its full capacity, and the members were well entertained. On the eighth evening, March 18, the members were made acquainted with Africa, when William L. Smith, M.D., gave a smoke talk on "Big Game Shooting in Somaliland."

The attendance at these talks has been increasingly large. Frequently interesting discussions have been held, and after each talk light refreshments have been served. Early in March the following special announcement was made:—

"The House Committee announces a new departure in the serving of lunches, whereby members may be served with either the regular three-course lunch at forty cents, as heretofore, or the different portions of it on the *à la carte* plan. One or two dishes have also been added for the latter service, thus enabling members to secure different combinations, possibly more satisfactory to them and at less cost than the regular lunch.

"It is hoped that this change will have the effect to popularize the club as the best noon meeting-place in the city for Technology men, and to this end all members, especially those who have not heretofore lunched at the club, are cordially invited to come in and make the innovation a success."

ANGELO T. HEYWOOD, '06, *Secretary*,
83 Newbury Street, Boston, Mass.

NEWS FROM THE CLASSES

1868.

ROBERT H. RICHARDS, *Sec.*, Mass. Inst. of Technology, Boston

Robert H. Richards has been collecting a great quantity of material for use in the preparation of his additional volume to his book on "Ore Dressing." He is now getting this into shape, so that it can be moved, and is planning to spend six weeks at camp in the White Mountains in June and July, writing on the book. He expects to work three shifts a day some days, and take an occasional walk over the mountains for exercise and recreation.

1870.

PROF. CHARLES R. CROSS, *Sec.*, Mass. Inst. of Technology, Boston.

The death of Mr. S. Matthews Cary, which occurred on April 1, 1905, after a long illness, but which has only recently come to the knowledge of the writer, will cause the most sincere regret, not only to his classmates, but to all who have been brought into contact with him. Mr. Cary came to the newly established Institute of Technology after having begun his studies in civil engineering in the Rensselaer Polytechnic Institute. He speedily took a high place in the esteem and affection of his fellow-students, and was the first and only president of the somewhat loose class organization of '70. Although he did not plan his course for a degree, he remained at the Institute until his class graduated. Soon after this time he entered into business at St. Paul as a member of the firm of Robinson & Cary, and continued such until his death, securing and steadily maintaining a personal and business reputation of the highest character. He leaves a widow, two daughters, and a son.

1875.

E. A. W. HAMMATT, *Sec.*, 10 Neponset Block, Hyde Park, Mass.

The twenty-fifth annual meeting and dinner of the class of '75 was held at Young's Hotel on March 8, 1907, at 7.30 P.M., with these members present: Aspinwall, Beal, Bowers, Dorr, Hammatt, Hibbard, Lincoln, and Willard. The business meeting was called to order by President Hibbard at 9.30 o'clock, when the records of the last meeting were read and approved. The secretary and treasurer read his reports, which were accepted. On motion of Mr. Lincoln a vote of thanks was given the executive committee for their services. On motion, Mr. Lincoln was directed to cast a ballot, as that of the class, for the election of officers, which he did, and the result was declared as follows: president, Thomas Hibbard; vice-president, B. L. Beal; secretary and treasurer, E. A. W. Hammatt; executive committee, B. L. Beal, S. J. Mixter, W. P. Willard. On the question of amending the constitution so as to permit a change in the date of holding the annual meeting, the secretary reported, as the result of a canvass of the replies to his circular requesting light on this subject, as follows: ten did not express any opinion; seven had no choice as to date; one preferred the date between December 10 and January 15; two preferred the date between December and March; one preferred the date between February 6 and March 10; one preferred the date between March 1 and March 15; one preferred the date between April and June; one preferred the date to be in June; one preferred the date to be in June or in October. As under the present constitution the date comes between January 1 and April 1, it did not seem advisable to change it. Adjourned at 11 P.M.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

The annual dinner and thirtieth reunion of the class of '77 was held February 27 at the Technology Club, with fifteen members present. Vice-President C. F. Lawton presided, and the

officers elected for the ensuing year were: H. H. Carter, president. C. F. Lawton, vice-president; R. A. Hale, secretary and treasurer. Letters were read from members unable to attend, telegrams from Swain and Kittredge in New York during the meeting, and a telephone message from Wood at Washington. The meeting was informal, and general experiences of various members were given. It is planned to issue a directory and photographs of the members as at graduation and also at the present time.—Howard Evans has been heard from at Idaho Springs, where he has been engaged in mining for a number of years.—Swain has testified as expert in the New York Central Railroad case, where the electric train was wrecked and many lives lost.

1879.

EDWIN C. MILLER, *Sec.*, Wakefield, Mass.

Horace J. Howe is resident engineer of the new Broadway Bridge over the Harlem River. The process of removing the old bridge span and substituting the new one was a rare test of engineering skill, and was carried out successfully.

1882.

WALTER B. SNOW, *Sec.*, 29 Russell Ave., Watertown, Mass.

Greenville Temple Snelling has moved his architectural office to 37 East 20th Street, New York, N.Y.—George W. Mansfield, who has been located at Westerly, R.I., for some years past, is now at 1123 Schofield Building, Cleveland, Ohio.—Harry G. Manning as mechanical engineer of the Crucible Steel Company of Pittsburgh, Pa., has been busy on plans for a million dollar plant.—The twenty-fifth anniversary dinner was celebrated at the Boston City Club on Thursday evening, February 7. Plans were discussed for the class reunion in June, and class colors were chosen. Gooding, Gerry, Herrick, Hall, Low, Warren, Lewis, Munroe, H. F. Ross, Darrow, French, and W. B. Snow were present.—Henry F. Ross

has transferred his office to that of the Mercantile Wharf Company, 88 Clinton Street, Boston.—John H. Ross, who is now abroad, has moved his office to 575 Atlantic Avenue.—Miss Clara P. Ames sails on April 20 for Naples, in charge of a small party, which will follow a carefully planned itinerary covering four months, in which they will visit Italy, Switzerland, France, and England.—Rufus F. Herrick has written an extremely interesting and complete work on “Denatured or Industrial Alcohol,” which is published by John Wiley & Sons, New York. The timeliness of this book, the number and variety of the illustrations, and the fact that it includes the history, use, manufacture, and composition of denatured alcohol all over the world should prove of great interest, especially at the present time.

1883.

HARVEY S. CHASE, *Sec.*, 27 State Street, Boston.

The secretary of '83, having exhausted the arts of special pleading for items of class interest, and likewise his patience, proposes hereafter to publish stories received by wireless. The hidden and inner mysteries of each man's double life will be unfolded, to the agonized astonishment of a wondering world. These statements apply to members who fail to promptly cough up items of their own. *Vide:* By wireless: “Gale has four children, stout and hearty. Has named them appropriately ‘Hurricane,’ ‘Cyclone,’ ‘Typhoon,’ and ‘High Wind’!”

1884.

PROF. WILLIAM L. PUFFER, *Sec.*, 307 Equitable Building, Boston.

The annual dinner was held at the Technology Club on the regulation night before Washington's Birthday at 6.30, and a very enjoyable evening was spent together. After a thorough discussion of the immediate business the thought of the coming twenty-fifth anniversary of the graduation exercises in Rogers set all hands to

talking of the past and the future. It was decided to appoint the three class secretaries, who couldn't find a suitable excuse for escaping, as a committee to prepare a special directory in honor of the time. Therefore Gill, Tyler, and Puffer will be after information from the boys, and asking all sorts of questions, and it was the sense of the meeting that none of the fellows should refuse to devote a little time to the preparation of the book. Appleton, Bardwell, Bennett, Coburn, Dearborn, Doane, Gill, Puffer, Rotch, and Tyler were present.—The secretary is sorry to have to present to the class the sad news of the sudden death of W. L. O'Brien. A card and newspaper clipping were received on the 23d of February, but there was no mention of the exact day of his death. He had been in perfect health, "and the announcement of his death came as a blow to many friends who were accustomed to think of him as enjoying the good things of life with his wife and daughter." Several years ago he retired from active work in the newspaper field, and devoted his time to travel and the carrying on of the estate left to him by the death of his father.—Another sad letter came on the fourth from classmate Rich, telling of the loss of his ten-year-old son Percy after an apparently successful operation for appendicitis. He was taken to the Garfield Hospital late Monday night, the 25th, and died early on Wednesday.

1885.

I. W. LITCHFIELD, Sec., 10 Kenmore Street, Boston.

The following clipping is from the *Boston Transcript* of March 12:—

Frederick H. Newell, chief engineer of the reclamation service, has been appointed director of the service to succeed Charles D. Walcott, who resigned to become secretary of the Smithsonian Institution. The announcement was made late Saturday by James R. Garfield, the new Secretary of the Interior. The appointment of Mr. Newell as director marks the creation of the reclamation service as a separate bureau in the Interior Department. Under the guidance of Mr. Newell as chief engineer the

reclamation service has grown to be an enormous branch of the government service. In less than five years the service has practically completed four irrigation projects, and will supply water this year to 282,000 acres of desert land. At the present time construction work is going forward on twenty-five projects in twelve States and Territories, involving an ultimate expenditure of \$40,000,000 and the reclamation of 1,200,000 acres. It has dug 1,267 miles of canal, several of which carry whole rivers. Its tunnels are more than nine miles long, and the excavations of earth and rock amount to 35,000,000 cubic yards, or about one-fourth of the estimated yardage of the Panama Canal. It has built ninety-four large structures, including two great dams, one in Nevada and one in Idaho. The work of the service is giving employment to 10,000 persons, and involves the expenditure approximately of \$1,000,000 a month.

1887.

EDWARD G. THOMAS, *Sec.*, 80 Wall Street, New York, N.Y.

The secretary has accepted the position of manager of the Aero Pulverizer Company of No. 80 Wall Street, New York. This company manufactures a machine for pulverizing and feeding coal to furnaces requiring a high heat. It is largely used in the cement industry, for metallurgical furnaces, and has been applied to steam boiler work.—E. A. Haskell has just returned from a vacation trip in Florida.—J. Eugene Freeman, who was burned out in the San Francisco fire, has located his office in the Cohl Building of that city.—F. H. Schwarz, who is still mechanical engineer at the Pacific Mills at Lawrence, has just finished placing machinery and power to a spindle 30,000 mill, and is beginning new plans for more buildings.—Among the work which Brett has recently carried out have been a park at South Manchester, Conn., and the arrangement of estates of Samuel Cabot, Canton, James J. Storrow, Lincoln, Robert Cluett at Williamstown, and Palmer Slade at New London. He now makes his home at North Duxbury, Mass.—Carpenter is away in search of better health, having suffered recently from nervousness and overwork. He intends spending some three or four weeks in Florida.—This season Emery is managing the comedian

James Kennedy.—F. A. Thomas reports that the Pawtucket Foundry Company, of which he is treasurer, has sold its entire product for 1907 and 1908, amounting to over \$600,000. A larger part of this product goes abroad.—Conant has returned to business, much improved by his recent vacation in Europe. Concerning it he has written me as follows:—

Left here early in January a year ago with my oldest son for Jamaica, arriving there on the 16th, just one year previous to the day we had the news of the earthquake. Spent some weeks in various parts of the island, and went from there to Bermuda, where my wife and another of my boys joined us. Spent six delightful weeks in Bermuda, returning to New York the latter part of March, and sailed a few days later for Naples with Mrs. Conant and my oldest son, Harold. Upon arrival at Gibraltar on Good Friday we had news of the eruption of Vesuvius, which occurred the day previously. Some of the passengers left the ship at Gibraltar, hesitating to continue the voyage. Upon our arrival in Naples, three days later, it was found that the reports of the devastation in the vicinity of Vesuvius had been by no means exaggerated. At Naples, as far as I could estimate, there was an average of some six or eight inches of volcanic dust, which had done much damage and created many discomforts for the inhabitants. Ashes were still falling in considerable quantities, and people were going about with umbrellas for protection. The city was largely emptied of its visitors. We spent a few days at Naples, visiting Pompeii as soon as the railroad connections were opened, having a very realistic, if not pleasant, experience there. Pompeii happened to be so located that for some reason or other the fall of ashes was not so heavy there as in most other points, thus making such a visit possible. I think we were among the very first that had visited the ruins since the eruption.

From Pompeii we went on to the Bay of Salerno, and made the famous journey by carriage along the southern coast of the Sorrento Peninsula, spending the night at the old Capuchin monastery. From Naples we went on to Rome, spending some ten days there, then to Florence for another ten days, and making a similar visit to Venice, thus travelling north with the season. From Venice we went on to the Italian lakes, Switzerland, Strasbourg, and into Germany, where we spent six weeks at a watering place, where we were joined by my uncle and aunt with their automobile, subsequently going to the heart of the Black Forest for the month of July. From the Black Forest we went down the Rhine, stopping over at several

places, rejoining my uncle and aunt at London preparatory to a delightful six weeks' trip through England and Wales in their automobile.

From England we returned to Germany for another month, finally returning to London by way of the Rhine and Holland, and sailing for home the last of October, after what, you will see, must have been a delightful and leisurely journey, as well as a beneficial one in every way.

—Dr. G. R. Tucker has given up his work at the City Hospital, where he has been so many years, to devote his entire time to industrial chemistry and bacteriological work, as the head of the firm of Tucker & Sammet. Their laboratory is at 68 Northampton Street, Boston.—Richard E. Schmidt, of the firm of R. E. Schmidt, Garden & Martin, is the architect for Montgomery Ward & Co.'s new building, which is now being built in Chicago. This building is said to be the largest reinforced concrete structure in the world.—Gulliver was elected in January, 1907, secretary of the section of Geology and Geography of the American Association for the Advancement of Science.

1888.

WILLIAM G. SNOW, *Sec.*, 1106 Penn Mutual Building, Boston.

The Boston *Transcript* of Feb. 4, 1907, states:—

Stone & Webster have issued a manual for 1907 giving brief descriptions of the various properties under their management, together with summaries of capitalization, particulars regarding their properties, the securities and earnings for the year 1906. Among other things this book shows that the combined capitalization of the companies under this management amounts to \$105,249,200, of which \$47,559,000 is in bonds and \$57,690,200 is in stock. The gross earnings of these companies last year amounted to \$13,410,779. The net earnings were \$5,048,882. The interest charges were \$2,035,951; the balance, \$3,012,931. The companies paid dividends of \$1,196,798.

—Frank M. James has removed from West Lynn to Beverly, Mass., where he is associated with the United Shoe Machinery Company.—Everett S. Jones is teaching in the Allen School, West

Newton, Mass.—F. B. Cole is principal assistant to Charles T. Main, engineer, at 45 Milk Street, Boston.

1889.

PROF. W. E. MOTT, *Sec.*, Mass. Inst. of Technology, Boston.

G. M. Basford has been made assistant to the president of the American Locomotive Company, a newly created position.—J. W. Cartwright is in charge of the Bangor Railway & Electric Light Company, of Bangor, Me.—E. V. French has recently been elected a member of the Lynn Water Board. During the latter part of 1906 Mr. French was elected vice-president and engineer of the Arkwright Mutual Fire Insurance Company. He has been continuously with the Inspection Department of the Associated Factory Mutual Companies since 1892, mainly on special work connected with the study of advanced methods of fire prevention and the development of fire protection. His new work will be closely identified with the old, the Arkwright Company being one of the Associated Factory Mutuals, as they are commonly known. In fact, it is the second company of the Association in point of size, and, together with the Boston Manufacturers' Mutual Fire Insurance Company, of which Kunhardt of our class was elected vice-president last year, carries over one-quarter the total insurance in the nineteen companies. It may not be amiss to mention that since 1890 the science of fire protection has made its greatest strides in this country, although, in spite of this, the appalling waste by fire continues to increase, all of which prevents reduction in rates of insurance on the ordinary property in cities and towns. During this same period, by the encouragement of improved methods of construction and protection,—and French has done his share of the work,—these Factory Mutual Companies have succeeded in reducing the insurance cost on factory property from an average of about 25 cents in the period immediately preceding 1890 to an average of but little over 7 cents per hundred dollars of insurance, the actual cost in the last ten years varying for the different classes of property between $3\frac{1}{2}$ and 10 cents

per hundred dollars of insurance.—Henry Howard has lately returned from a trip abroad, taken largely in business interests.—W. S. Johnson has resigned his position as assistant engineer to the Massachusetts State Board of Health, and will enter private practice. He is now at work on plans for a water purification plant for the city of South Norwalk, Conn. The works will have a capacity of 3,000,000 gallons per day. His office will be at No. 101 Tremont Street, Boston.—W. H. Kilham has taken a prominent part in the preparation of the recently published "Report made to the Boston Society of Architects by its Committee on Municipal Improvements." The purpose of this committee was "to collect and study any plans . . . for making Boston now, and, as it grows larger, more convenient for its inhabitants, better adapted for commerce, and more beautiful in appearance." In a "Diagnosis of the Case" Kilham gives his opinion of the reason for the unsymmetrical growth of the city. It is caused: "First, by the great areas of unoccupied space (land and water) which lie in the very heart of the city, cutting off sections from each other and preventing communication. Second, by too restrictive building laws, both as to height and material, which are largely responsible for the non-development of some of these lands, although at the same time they allow a belt of inflammable dwellings in the outer wards, and drive many people to Brookline, Newton, Cambridge, etc., where their taxable property as well as their good qualities of citizenship are lost to Boston." These ideas are then enlarged upon, and the "Diagnosis" closes with the following pertinent remarks: "In short, to improve Boston, consolidate the population by filling the gaps in the city plan. Avoid congestion by enlarging the business district, and keep within the city limits the prosperous and educated class that now goes to the suburbs." An inner and an outer system of boulevards encircling the city and connecting the nearer suburbs are among the remedies suggested, as well as some changes in the development of the Fenway. That '89 has played an important part in the study of a question which is bound to compel more and more attention on the part of the people of Boston is attested further by the part which J. E. Chandler took in the report of this same committee. On April

4, in connection with the Boston Library Free Lecture Course, Kilham will deliver a lecture on "Spanish Cathedrals."—W. W. Lewis is now chairman of the Board of Water Commissioners of Hyde Park, Mass.—At the January meeting of the American Institute of Architects, held in Washington, D.C., J. L. Mauran was elected a director of the Institute.—W. G. Plumer is in the leather business, and his address is Girard, Penn.—Through misinformation and ignorance on the part of the class secretary a reference was made in the last number of the REVIEW which implied that F. E. Sanborn is still at Tufts College. Such is not the case; and in a letter recently received he states that in addition to his regular work as Professor of Industrial Arts in Ohio State University he is now a member of a recently organized company for carrying on a consulting engineering practice.—A new reprint of "Industrial Chemistry," by Professor Thorp, will shortly appear from the press of the Macmillan Company. Professor Thorp is this year in charge of that portion of the second-year work in Analytical Chemistry taken by Courses V., VIII., X., and XII.—G. C. Wales has recently dissolved one partnership and formed a second! He was married in April last, and is now in business on an independent basis at No. 15 Beacon Street, Boston.—Jasper Whiting is at Rumford Falls, Me., engaged in experimenting upon a new chlorine process for the manufacture of caustic soda and bleaching powder.—Frederick E. Woodbury is connected with the Milwaukee Coke and Gas Company. His address is 23 University Building, Lock Box 1619, Milwaukee, Wis.—Sanford E. Thompson has recently removed into new offices at Newton Highlands, Mass. During the past year he has been engaged upon projects relating to concrete and reinforced concrete in Massachusetts, New York, and Pennsylvania. "Concrete, Plain and Reinforced," by Taylor and Thompson, is now selling in its sixth thousand,—a somewhat unusual record for a technical book.—Schuyler Hazard is with the New York, New Haven & Hartford Railroad, in charge of four-tracking and electrifying the Harlem Division.—J. P. B. Fiske, vice-president of Fiske & Co., Inc., is located in the Flatiron Building, New York City, but his family is still living in Auburndale, Mass.

1890.

GEORGE L. GILMORE, *Sec.*, Lexington, Mass.

The following is from the *Boston Post* of February 23d:—

Professor Gary N. Calkins, Ph.D., a graduate of the Massachusetts Institute of Technology in 1890, and for several years professor of invertebrate zoölogy at Columbia University, has just been appointed to the new chair of protozoölogy, the study of the lowest form of animal life, recently created at Columbia, at the last meeting of the trustees.

This chair is the first of its kind in the United States and the second in the English-speaking world, the first, at the University College at London, having been founded only a few months ago.

1892.

PROF. WILLIAM A. JOHNSON, *Sec.*, Mass. Inst. of Tech., Boston.

The following changes in address have been received since the last issue of the REVIEW. B. P. DuBois, United States steamship "Missouri," care Postmaster, New York, N.Y.—P. A. Hopkins, 801 Provident Building, 50 South 4th Street, Philadelphia, Pa.—S. B. Ely, 5122 Pembroke Place, Pittsburg, Pa.—A. G. Randlett, Pacific Coast Oil Company, Division B, Oakland, Cal.

1893.

FREDERIC H. FAY, *Sec.*, 60 City Hall, Boston.

At the Boston City Club, January 23, an informal luncheon was given by Leo W. Pickert, class president, to Joseph W. Ellms, of Cincinnati, Ohio. Ellms has been located at Cincinnati for the last nine years, and for eight years has been chemist for the Commissioners of Water Works of that city. Present at the luncheon were Bemis, Crosby, Dawes, Ellms, Fay, F. B. Forbes, Keith, A. L. Kendall, H. A. Morss, and Pickert.—An informal class dinner was held at the Boston City Club on the 22d of March. In the evening,

upon the invitation of Charles Garrison, '91, the members attended a private recital of the choralcelo at Chipman Hall, Tremont Temple. After the recital the members adjourned to the Boston City Club, where the remainder of the evening was spent in a social way. Those present were: Barnes, Blood, S. A. Breed, Densmore, Fay, Glidden, Keith, F. B. Kendall, Keyes, Lamb, E. S. Page, Pickert, Reynolds, Taintor, Taylor, and Thorndike ('94).—Albert Richard Beddall, M.D., is located at 5319 Chestnut Street, Philadelphia, Pa.—Maurice B. Biscoe, architect, who removed to Denver, Col., not long ago, and has opened an office in the Commonwealth Building of that city, is the newly elected secretary of the Rocky Mountain Technology Club.—Farley G. Clark is superintendent of motive power of the Pennsylvania, New York & Long Island R.R. His address is Fourth and Front Streets, Long Island City, N.Y.—Nathaniel R. Craighill has a position as electrical and mechanical engineer with the Mechanical Appliance Company, Milwaukee, Wis.—W. W. Crosby is with F. W. Dean, 53 State Street, and devotes his time principally to problems connected with the organization and design of textile mills.—Herbert N. Dawes, vice-president of the Nightingale & Childs Company, has recently become secretary, also, of the Dominion Asbestos Company, Limited. His office has been moved to 205 Congress Street, Boston.—James Vaughan Dennett, cabinet maker and furniture designer, formerly of Hingham, is located at South Framingham, Mass.—Something of Arthur Farwell's work in behalf of American music, as composer, lecturer, and editor of the *Wa-Wan Press*, is already known to the readers of the REVIEW. By diligent and painstaking research he has brought to light and preserved in permanent form much in American folk-song. Speaking of a lecture given by him on the 22d of March, the Boston *Transcript* of the following day said:—

A brilliant audience assembled at the Tuileries last evening at the joint meeting of the American Folk-lore Society and the American Music Society to listen to the lecture of Arthur Farwell on "American Music." It is a subject about which there has been much controversy, the faces of many musicians being unalterably set towards Europe. This is no longer necessary, for in almost everything else we have set up standards of our own. We

have, however, a great cosmopolitan country, a bringing together of many elements, each of which is giving its best to us in divers ways, and will, if called upon, give its best to us in the way of music. Illustrations on the piano showed that Russia, Scandinavia, France, Germany, and the like have schools in which not only the folk-song, which is the basis, but the treatment, is peculiar to that nation. We can recognize many of these styles at once.

In America the case is very different, for not only are there the many foreign elements which are being assimilated, but there are many sources of folk-song. In the South there is the creole and the negro. Dvořák found among the Seminoles melodies that pleased him, although his great symphony work was done with negro melodies. In the West there is the cow-boy influence which has developed its rude songs, there are everywhere the Indians, and on the West coast there is the Spanish. Each of these has its own characteristic thematic material for music, and all have claim for recognition. The speaker, therefore, believes that the time has come for an American music, and that it will be an expression of liberty, just as all our institutions are founded on the same broad principle.

The musical illustrations of the evening were, the greater portion of them, settings made by Mr. Farwell, selecting themes which are well known or have been found by him in his researches. The numbers evinced surprising research, and demanded much travel and study for their collection. They included "Moanin' Dove," a negro song, a theme from Vancouver, two settings of Omaha melodies, one of which, "The Old Man's Love Song," is particularly striking and plaintive; "Bury me out on the Lone Prairee," a cow-boy melody, a suite of airs from a ceremony of the Omahas and a Navajo war dance. These in part were presented by Mr. Farwell at the piano, while in the way of a surprise to the company, Clarence Wilson, who has evinced great interest in the development of this work, sang with splendid voice the darky song, the cow-boy song, one from the West coast, with its prevailing Spanish rhythm, and the striking Zuñi invocation to the sun.

—Ira J. Francis is sales agent of the John A. Roebling Sons Company at 326 East Market Street, Los Angeles, Cal.—Edward McKim Hagar, president of the Universal Portland Cement Company, will be located after May 1 in the Commercial Bank Building, Chicago. His company has furnished about eighty thousand barrels of cement for the Montgomery Ward & Co.'s new building in Chicago. This

building is said to be the largest reinforced concrete structure in the world.—Charles H. Johnson is the civil engineer in charge of the making (in concrete) of a large relief map of the Panama Canal at the Jamestown Exposition.—Mr. and Mrs. Charles W. Ellis, of Newtonville, Mass., announce the engagement of their daughter, Miss Annie Claflin Ellis, to Frederic Hale Keyes.—The address of Albert T. Marshall, refrigerating engineer, is 630 Capitol Avenue, Hartford, Conn.—Benjamin M. Mitchell has returned from Johannesburg, South Africa, where for several years he has been assistant general manager for Fraser & Chalmers, Limited. His present address is 244 Lafayette Avenue, Passaic, N.J. At the Technology Club of New York, in March, Mitchell gave a talk upon his experiences in the Boer War, in which he held a commission in the British army.—Edward Gardner Pease is engaged in the manufacture of engines, steam fitters' supplies, and cotton and linseed oil machinery at the Buckeye Iron and Brass Works, Dayton, Ohio.—Edward Bryant Randall, formerly of Chicago, has gone into mining work. His address is care Big Creek Gold Mining Company, Limited, Salmon, Ida.—Charles M. Spofford, professor of civil engineering at the Polytechnic Institute, Brooklyn, N.Y., intends to spend the summer abroad, in company with his family, visiting England, France, Switzerland, where most of their time will be spent, and Germany.—Charles W. Taintor, formerly bond salesman with William A. Read & Co., has recently become associated with the firm of Tucker, Hayes & Co., bankers and brokers, in charge of their newly opened bond department.—S. Edgar Whitaker, electric railway engineer, is office manager for The American Society of Mechanical Engineers at the new Engineers Building, 29 West Thirty-ninth Street, New York City.

1895.

H. K. BARROWS, *Sec.*, 6 Beacon Street, Boston.

Haven announces that he will continue his association with Mr. F. W. Dean, formerly of Dean & Main, at 53 State Street, Boston,

for the maintenance of a department in refrigerating engineering and its allied branches. He will give attention to the design of cold storage warehouses, power houses, cooling and freezing plants, to reports, tests, consultations, etc. Haven has had an extensive experience in matters pertaining to refrigeration gained with the Quincy Market Cold Storage Company and later with Dean & Main.—W. S. Williams has been recently made purchasing agent for the Arnold Print Works at North Adams, Mass. He announces the birth of a daughter, Florence Dorothea, born January 7.—Coburn is with the Illinois Steel Company at their South Works, learning the running of an open hearth furnace. His address is 88th and Buffalo Avenue, South Chicago, Ill.—François E. Matthes writes the secretary as follows:—

My address from now on will be United States Geological Survey, Washington, D.C. Have completed my Yosemite map, and am starting back to the East via the Southern States, making a number of stops on the way to inspect topographic field parties, especially in Arizona, New Mexico, and Texas. Wish I could be present at the class meeting.

—H. D. Jackson reports change of office address from 4 State Street to 88 Broad Street, Boston, where he will have enlarged office room and increased facilities for work. He is busy as an electrical engineer, making power tests and investigating plants for brokers, etc.; is also doing experimental work to improve the operation of a weaving machine.—Dyer is a contractor and builder, with offices in the Albany Trust Company Building at Albany, N.Y. After leaving the Institute, he was for some time with Jonathan Clark & Sons, builders, of Chicago (of which firm F. W. Clark, M. I. T. '80, is a member), and superintended the construction of buildings in various parts of the country, notably the Albany Savings Bank Building and Ten Eyck Hotel in Albany, the Park Building in Pittsburg, etc. Some six or seven years ago Dyer started in for himself at Albany, and is now doing work all through Eastern and Southern New York. He has recently completed "The Hampton" in Albany, a very attractive-looking eight-story hotel, with brown sandstone front and of the latest up-to-date form of construction.—Hunt is

once more in Boston, being located at 84 State Street, Room 521, as assistant electrical engineer for the Old Colony Street Railway Company and Boston & Northern Street Railway Company. For the last three years he has been at Manchester, N.H., acting as engineering assistant to the general manager of the Manchester Traction, Light, and Power Company. This company is one of the most important on the Merrimac River, and operates four water power plants and one steam power plant. One of their newer plants is that at Garvin's Falls, one of the finest privileges upon the Merrimac River. Hunt's new field of work is largely along executive lines, although there is also considerable engineering work in connection with the operation and maintenance of these two roads.—Howe is at Columbus, Ohio, as resident engineer, in charge of the construction of the Water Purification Works Pumping Station.—Swift is department engineer on the Board of Water Supply for New York City, his present address being Cornwall-on-Hudson, N.Y.—Gay reports change of address to Union Club, New York.—Gardiner is now at Baltimore, 319 Equitable Building.—Farquhar is at Santa Monica, Cal.—Wolfe's address is now 16 Orange Avenue, Cranford, N.J.—Alden is at Hotel Lincoln, Columbus, Ohio. He is in charge of long-distance work of the American Telegraph and Telephone Company in Ohio.—Ames is at 17 Fairfield Place, Yonkers, N.Y.—Blodgett reports change of address to 24 State Street, New York.—J. H. Bourne is now at 2 St. James Avenue, Bradford, Mass.—Brackett is still with the J. L. Mott Iron Works. They have recently moved to 120 5th Avenue, N.Y.—S. K. Clapp is at Brown Station, N.Y., where he is engaged as assistant engineer on the Board of Water Supply for New York City.—C. H. Clark has recently moved his business to 88 Broad Street, Boston, Mass.—Crafts is now at Oberlin, Ohio.—Dickerman is at 1110 Mound Street, Madison, Wis. He is assistant professor of chemical engineering at the University of Wisconsin.—L.A. Abbot is now in the engineering department of the American Locomotive Company at Schenectady, N. Y.—McManus is in contracting work, principally on railroads in Canada, and is now at St. Casimer, Portneuf County, Quebec.—Libby is back again in the

East, and is at 328 Forest Park Avenue, Springfield, Mass.—Sherman has given his time since graduation chiefly to the compiling, editing, and publishing of technical books, and has of late made a specialty of engineering and mechanical catalogues. This double training, in technical work and in the details of publishing, appears to afford a basis for effective catalogue work, and manufacturers of machinery appreciate the advantage of having the preparation of their catalogues in the hands of a technical graduate trained in advertising and publishing methods. The work appears to constitute a unique and valuable specialty, for which, however, many years of close preparatory work have been requisite. Sherman's offices are at 6 Beacon Street, Boston.—A meeting of the class was held on February 5 at the Technology Club, there being present F. A. Bourne, J. H. Bourne, Hunt, Jackson, President E. A. Tucker, and the secretary. It was voted to amend Article I. of the Constitution by striking out the words, "All students who have taken a majority of studies with the class of '95 for two or more years," and substituting, "All students who have appeared upon the records of the Institute as taking one or more subjects with the class shall be considered members, except when electing otherwise." So that this article will now read, "All students who have taken a degree with the class shall be considered its members, and all students who have appeared upon the records of the Institute as taking one or more subjects with the class shall be considered members, except when electing otherwise." Under Article VIII. of the Class Constitution the above amendment to Article I. is now operative, having been approved by vote at two successive meetings. A notice of this change will shortly be sent to all members of '95 (as thus redefined) to procure an up-to-date list of these. It was also voted to instruct the secretary to call to the attention of the Association of Class Secretaries at some future meeting this action of the class in thus enlarging its membership by including men who have been affiliated with it, as a measure which should perhaps be considered for adoption by other classes. A dozen or more men expressed their intention of being present at this meeting, but, owing to the severe storm which prevailed, did not

appear. Although numbers were small, a very pleasant evening was spent, during which a telegram of greeting was received from Lonngren at Pueblo, Col., as follows: "Greetings from the Rocky Mountains to Class of Ninety-five."

1896.

EDWARD S. MANSFIELD, *Sec.*, 70 State Street, Boston.

On the 15th of January E. C. Hultman was married to Elizabeth Blake at 219 Commonwealth Avenue, Chestnut Hill. After May 1 Mr. and Mrs. Hultman will be at home at 219 Washington Street, Quincy, Mass.—N. C. Grover, formerly of Washington, D.C., has recently moved to 81 North 18th Street, East Orange, N.J.—On March 22 H. A. Pressey, of Washington, D.C., delivered an address before the National Geographic Society of Washington, on "Utilizing the Surface Waters of the United States for Power."—On Sept. 13, 1906, a son was born to Mr. and Mrs. J. F. Brooks, who live in North Hanover, Mass.—Word from A. W. Crawford announced that he was married early in 1906 to Miss Cohen, and is living in Philadelphia, Pa., where he is practising law.—Lewis T. Cannon is engaged in the practice of architecture in Salt Lake City, Utah.—A. L. Drum has left the Chicago & Milwaukee Electric Railway, and is now in business as a consulting engineer, with an office in the American Trust Building in Chicago, Ill.—A. K. Downes has left the Weber Railway Joint Company, and has accepted the position of assistant construction superintendent with J. G. White & Co. of New York.—Henry Gardner, of Pittsburg, Pa., was married to Miss Julia Streeter, of Concord, N.H., on Sept. 29, 1906. They are now residing at "The Cornell" on Thomas Boulevard, Pittsburg.—On Oct. 23, 1906, Max Hellman was married to Miss Helen Schwab. Their home address is now 4256 West Pine Street, St. Louis, Mo.—James H. Haste, manager of the Kodak Park Works of the Eastman Kodak Company, was married on Nov. 25, 1906, to Miss Hannah M. Hinchcliffe, and now resides at 4 Gorsline Street, Rochester, N.Y.—Henry A. Sher-

man was married to Miss Lillian J. Wright on Jan. 2, 1907. Their home address is 9 Chauncy Place, Jamaica Plain.—John H. Willis was married to Miss Gertrude A. Ball on Oct. 10, 1906. Mr. and Mrs. Willis are now at home at 1430 Arch Street, Berkeley, Cal.—On May 1 the secretary contemplates changing his office from 70 State Street to 39 Boylston, where he will be glad to see any '96 men or receive news of their whereabouts.

1897.

JOHN A. COLLINS, Jr., *Sec.*, 74 Saunders Street, Lawrence, Mass.

The secretary has sent out a circular letter with a reply data sheet, and he asks that members return these sheets promptly, thus aiding him in his work.—John E. Carty (I.), formerly with the sewer department, city of Boston, is now in the engineering department.—Charles L. W. Pettee (V.) is a member of the Hartford Laboratory Company, Hartford, Conn., that does general analytical work, particularly steel, iron, coals, and oils. He has twice received the appointment of "State Chemist," each time being for two years. In March of this year he was appointed by the Bureau of Internal Revenue, Treasury Department, chemist for denaturants for the Connecticut district.—James M. Brown (II.), formerly with the Stirling Consolidated Boiler Company, Mansfield, Ohio, is now assistant general manager of the Casey-Hedges Company, Chattanooga, Tenn.—William E. Reed (VI.), who is with the Westinghouse Electric and Manufacturing Company, has direct charge of the design of all induction motors put out by this company.—Harry B. Hunt (II.) is manager of the electric locomotive and truck department of the American Locomotive Company, Schenectady.—A. E. Kimberly, who is in Columbus, Ohio, with the Ohio State Board of Health, working on sewage purification and water softening, has since January of this year been working in collaboration with the United States Department of Agriculture, Bureau of Plant Industry.—Walter Humphreys (II.), registrar of the Institute, has been appointed instructor in mechanism, in addition to his regular duties.

—T. C. Atwood (I.) is designing engineer with the Board of Water Supply, New York City.

1898.

PROF. C.-E. A. WINSLOW, *Sec.*, Hotel Oxford, Boston.

Coffin is now instructor in physics in the college of the City of New York. His home address is 17 Lexington Avenue.—Page has moved out to Sedalia, Col., acting there as resident engineer of the E. I. Du Pont Company.—Zimmerman has left Chicago, and is now at 1101 Hennen Building, New Orleans, as contracting agent for the American Bridge Company of New York.—Dr. F. L. Richardson has taken an office at 1074 Boylston Street, near Massachusetts Avenue.—Shedd is now at 6512 Stewart Avenue, Chicago. He is inspector of iron bridge erection for the Chicago & North Western.—Byam is superintending the construction in the electric zone of the Grand Central Station, New York.—Streng has moved to Louisville, Ky., as chief engineer of the Kentucky Electric Company, with address at 1525 Third Avenue.—Treat sends his address as 398 Spring Street, Portland, Me.—Philbrick has left Chicago for the west coast, and may be reached at the Spokane Club, Spokane, Wash.—Sawtelle is now with the American Telephone and Telegraph Company, 125 Milk Street, Boston.—Everett has moved to Seattle, and is practising architecture at 426 Walker Building, Seattle, Wash.—Dr. H. W. Jones has accepted an appointment as surgeon in the United States army, and is now on duty in Manila.—Hayden is now in Denver, at 303 Colorado Building.—Monteith has left Boston for the Pacific coast, to take an appointment as superintendent of parks in Portland, Ore.—Spaulding sends a new address, 28 West Street, Pittsfield, Mass. He is junior member of the firm of Barnes & Spaulding, civil engineers and surveyors.—Bacon is locating engineer for the La Dicha & Pacific Railroad at Apartado 25, Acapulco, Guerrero, Mex.—Booth is also in Mexico with the Montezuma Copper Company at Nacozari, Sonora, Mex.—Bergen has travelled in the opposite direction, to take a position with the Yukon Consolidated Gold Fields Company and North-west Hydrau-

lic Mining Company at Dawson, Yukon, Canada (Box 940).—Draper is now at Chrome, N.J., with the United States Metals Refining Company.—Crowell has returned to Boston as salesman for the Westinghouse Electric and Manufacturing Company, 716 Board of Trade Building.—Thayer has been appointed instructor in structural engineering at the Carnegie Technical Schools, Pittsburg. His address is 712 S. Linden Avenue.—Strickland wrote as follows, December 4, from the office of the San Juan Light and Transit Company, San Juan, Porto Rico:—

Have just spent a few hours reading the July and October issues of the REVIEW, in the former of which you had me down as being in the construction department of the chief engineer of the Susquehanna Central Railway Company of Pennsylvania. As a matter of fact, *I was the chief engineer*, being the representative of J. G. White & Co. (construction department). However, that is over, and I am now J. G. White & Co.'s engineer for Porto Rico.

I have charge of the construction of a new hydro-electric plant of 3,000 H. P., including 24 feet concrete dam, 2,300 feet tunnel, power-house transmission line, and sub-stations, etc. Am also making surveys for the extension of the above railroad to be electrically operated. I am wrestling with Spanish and ignorant engineers and laborers, but expect to get results soon.

On the 26th of December Strickland was married at St. John's Church, San Juan, to Miss Margaret Field Lewis, daughter of Mrs. George Lewis.—Danforth, in response to a pressing request for information, from the secretary, writes as follows:—

Up to about two years ago I was in Pittsburg, following the straight and narrow path of an assistant mechanical engineer in the offices of the Westinghouse Electric and Manufacturing Company. My health was not of the best, thanks to the smoky climate and the confinement, so I came East, and became an inspector on a large concrete sewer which was being put in for the city of Salem. The work agreed with me; and somehow I seemed to agree with the engineers in charge well enough that I was given charge in succession of the placing of some 2,000 feet of 5-foot C. I. pipe across a neck of Salem Harbor, then of about 10,000 feet of 30-inch C. I. pipe in water from 8 feet to 35 feet deep at low tide, and finally of two sections,

about 4,000 feet, of 60-inch concrete sewer through bad ground near tide-water. The placing of the 30-inch pipe out into the harbor was specially noteworthy in that the joints in the pipe were all made with hot lead poured over jute, just like a water-pipe joint, and also because there is but one other piece of work of this sort on the Atlantic coast.

Late last fall I made some business arrangements by which I started a general contracting business, specializing on concrete work, and have so far done a section of 48 inch concrete sewer for the city of Salem and a highway bridge at Waters River, Danvers, Mass., for Essex County, and I am figuring several jobs which will be let next month, among them being a concrete dam, another piece of concrete sewer, and the concrete pieces for an iron bridge.

—On Saturday, March 2, a very pleasant reunion was held at the Tech Union in joint session with the ten-year class of 1908. The following account is extracted from the *Tech* of March 4:—

'98 and '08 started a new custom in great style Saturday evening at their Kommers at the Union. Ninety men were present, twenty-two of them being '98 men, and five members of the University of Maine basket-ball team. Professor C.-E. A. Winslow, secretary of 1898, and H. T. Gerrish, president of 1908, acted as toastmasters.

The speakers were Professor Winslow, A. A. Packard, H. L. Coburn, W. H. Godfrey, K. W. Waterson, and D. W. Edgerly, of the class of 1898, and G. T. Glover and Kurt Vonnegut, of the class of 1908.

During the dinner a telegram was sent to the North-western Alumni Association, which was holding a dinner at the University Club, Chicago. The telegram said: "'08 and '98 dining at Tech Union pause before their sixth beer to send greetings."

Professor Winslow gave a new definition for Tech spirit in his speech. He said that the Tech spirit is the scientific spirit, which no one but scientists and engineers possess. The scientist feels that there are certain facts concerning the world, and he learns these facts, so as to control the world. The world is a fact, and, far from being ignored, must be studied.

It used to be a fact that the talkers and thinkers ran the world, but now the scientists and engineers, who know facts and go by them, are coming into power. These men are working to make the world reasonable.

"At Yale," said Professor Winslow, "they have a custom of standing up and saying, 'For God, for Country, and for Yale.' It is a fine thing, but

I think we can have a better motive for our life,—‘For Truth, for Service, for Technology.’”

1899.

HERVEY J. SKINNER, *Sec.*, 93 Broad Street, Boston.

Arthur I. Kendall has resigned his position at Panama, where he was connected with the Board of Health Laboratory of the Isthmian Canal Zone, and is now director of the Florida State Bacteriological Laboratory.—W. A. Kingman reports the arrival of a young lady into his home on Dec. 23, 1906. The new-comer bears the name Elizabeth Alden Kingman.—A. A. Reynolds died at Altadena, Cal., on Sept. 14, 1906, aged thirty-three years. Reynolds was also a Williams ('97) man, and after leaving the Institute was an instructor at Williams.—W. S. Newell was married Jan. 23, 1907, to Miss Caroline Elizabeth Moulton, daughter of the Hon. George Moulton, of Bath, Me. The wedding took place at the Central Congregational Church, Bath. Mr. and Mrs. Newell made an extended trip through Cuba immediately after their marriage.—Harry L. Morse, now a lieutenant in the United States Army, is located at Fortress Monroe, Va.—W. H. Sutliff, who is with the Trussed Steel Concrete Company, has been transferred from Detroit to Cleveland.—Among the bulletins of the United States Geological Survey may be found several references to the work of W. C. Phalen. Bulletin 285 contains a paper by Phalen on the coal resources of the Kenova Quadrangle in Kentucky. In the same bulletin are accounts of Phalen's work on the clay resources of North-eastern Kentucky and the copper deposits near Luray, Va. Another paper by Phalen appeared in *Economic Geology*, July, 1906, on the "Origin and Occurrence of Certain Iron Ores of North-eastern Kentucky." Phalen also reports the birth of a "skidoo" baby, Walter Clifton, born Sept. 23, 1906.—W. Scott Matheson's present address is Seattle, Wash. He has recently gone to Seattle from Nevada.—Announcement was received at the secretary's office recently of the death of James S. Barber, Sept. 15, 1900.—Mr. and Mrs. W. O. Sawtelle are receiving congratulations on the birth of a daughter, Louise Kaler Sawtelle,

Jan. 20, 1907.—C. Gardner Barry writes from New York that he is still spending most of his time in the Pennsylvania tunnels, and that the compressed air agrees with him.—Among the recent publications of the United States Geological Survey are Water Supply and Irrigation Papers, No. 189 by E. B. Phelps, on "The Prevention of Stream Pollution by Strawboard Wastes," also No. 185 by E. B. Phelps and C.-E. A. Winslow, on "Investigations on the Purification of Boston Sewage." The latter paper contains a history of the Sewage Disposal Problem.—Haven Sawyer was in Boston for a few days in March. Sawyer is at present developing a mining property in Idaho.—The engagement has lately been announced of Edwin F. Samuels to Miss Kate Tindall, of Washington, D.C. Samuels has resigned his position as examiner in the United States Patent Office, and is now with Stuart & Stuart, patent attorneys, in Baltimore.

1900.

RICHARD WASTCOAT, *Sec.*, Dedham, Mass.

The secretary's want ad. in the last number, asking for information and items of interest about class members, developed no "unsolicited testimonials." Now the question arises whether to increase the space or try some other method. The latter would seem to be the course to take, and the secretary is open for suggestions. In running over a catalogue that the secretary has made up, showing the location of the men according to States, he thought it might be interesting to start Down East, in Maine, and take a trip around the United States. Starting in Maine, we find Burroughs (X.) in Rumford Falls and Moody (XIII.) in Bath. Jumping over to New Hampshire, Pitcher (II.) is in Keene, Richardson is in Pelham, Everett (I.) and I. Osgood (II.) in Concord. Then down to the "Hub," Bowditch, Brown, Briggs, Charles, Cotting, Gibbs, Jennings, Russell, Stearns, Wastcoat, Wedlock, Weeden, and Cutting, all of Course I.; Ashley, Burnham, Graff, Hodson, Learnard, Lingley, Smith, Walworth, Warren, and Horton, of Course II.; Emery (III.), Beekman, Kattelle, and Rand, Course

IV.; McCrudden, Lewis, and Melcher, V.; Neall, Penard, and Corliss, VI.; Peck, VIII.; Draper, Howe, and Weeks, IX.; Brigham, X.; Simpson and Wentforth, XIII. Scattered over the State, Adams and Ripley (V.) are in Lawrence; Conant (VI.), Newburyport; Brock (VIII.), Worcester; Fitch (V.), Peabody; Hapgood (VI.), Lynn; Crowell (I.), East Dennis; and Borden (II.), in Fall River. Rhode Island has French (V.) in Providence and Sherman (IV.) in Westerly. Ansonia is probably the most attractive place in Connecticut, for Suhr (II.) and Schneller (II.) were there at last accounts. "Manhattan Isle" is being well cared for by Hamlin, Harps, Jouett, Searle, Redman, Suter, Tuck, and Tudbury, of Course I.; Brooks, Goodridge, McGowan, and Zeigler, Course II.; Clow, Pigeon, and Van Merrick, IV.; Ellis, V.; Blair, Hall, Keith, and Hopkins, VI.; Brown, X.; Barney and Wyman, XIII. Up State there is Stone (I.) in Cold Springs, Hooper (XIII.) and Fulton (VI.) in Albany, Chase (II.) and Ingalls (II.) in Syracuse, Hopeman (IV.) in Rochester, Silverman (VI.) in Olean, Sanders (V.) and Vogel (I.) in Buffalo. Going over into Jersey, Reimer (I.) is in East Orange, and Edson (II.) in Elizabethport. In Pennsylvania, Philadelphia leads in numbers, with Miller, I.; Maxfield, II.; Brown, VI.; Conant, VII.; Hussey, Macpherson, and Rossmassler, XIII. Scattered among the other cities, Campbell (III.) and Witherell (XIII.) are in Harrisburg, Seaver (I.) in Pittsburg, Briggs (XIII.) in McKeesport, Price (IV.) in Pencoyd, Badlam (III.) in Steelton, and Morgan (VII.) in York. Keeping further South, Luyties (II.) is in Baltimore, Md., and Stratton (IV.) and Southworth (IV.) are in Annapolis. Smith (I.), Gardner (II.), Lawrence (IV.), and Cady (VI.) are in Washington; Thurber (I.) and Dean (VI.) are in Norfolk, Va.; Ashley (X.) is in Newall, W. Va.; Collier (VI.) and Walker (IV.) are both in Atlanta, Ga., Chaffee (IV.) in Birmingham, Ala., Porter (XI.) in New Orleans, La.; Littlefield (VI.) is in Nashville, and Stevens (III.) in Copperhill, Tenn. Coming back into the Central States, Brown (V.) and Buffum (II.) are in Cleveland, Ohio, Mead (X.) in Dayton, Rapp (IV.) and Thayer (V.) in Cincinnati, and Dorey (III.) in Newark. Going west into Indiana, Davis

(IX.) is in Lafayette, and Fosdick (XI.) in Indianapolis. In Illinois, Chicago leads all the Western cities, claiming Chase and Leonard, I.; Schmidt and Hough, II.; Jackson, IV.; Cayvan and Holbrook, V.; Barton and Herbert, VI.; Hall, VII.; Merrell, X. The remaining States west of the Mississippi claim only one or two men, and there are many miles between them. Root (III.) is in Hazel Green, Wis., Balcom (V.) in Ann Arbor, and Perry (II.), Grand Rapids, Mich. In Minnesota, Sperry (II.) is in Minneapolis. Manley (II.) is in Kansas City, Kan., and Clausen (IV.) in Davenport, Ia. Down in Texas, Conant (VI.) is in Dallas, and Paul (II.) over in Mesilla Park, N.M. In Colorado, Gauss (IX.) is at Colorado Springs, Batcheller (III.) in Smuggler, and Moulton (III.) in Telluride. Johnson (III.) is at Millers, Nev., and Roberts (III.) at Great Falls, Mont. Down the Pacific Coast Seattle, Wash., leads with Allen and Frink, II.; Bugbee, III.; and Hunt, XIII.; and N. Yakima claims Oxnard, I.; Plummer (III.) is in Placerville, Cal., Barker (VI.) in Ventura, White (I.) in Los Angeles, Cook (I.) at Cavite, P.I., and Knight (V.) in Porto Rico. And, in foreign countries, Gallagher (VI.) is in Germany, Stewart and Ford (IV.) in France, Hirokawa (VI.) in Japan, Patch (X.) in Syria, Mott-Smith (VI.) in Italy, Kendall (VII.) in Panama, Shapley (X.) in Cuba, Clary, Elbert, and Tweedy (III.) in Mexico, and Keay (II.), Leach (III.), and Johnson (X.) in Canada.—Brooks (II.) writes as follows:—

All that I can give you now is that I have been commissioned lieutenant in the Naval Militia as engineer officer of the United States steamship "Newark" (900 H. P.), and in compliance with the recent law I have been examined, and now hold a license as Marine Chief Engineer for unlimited horse-power.

The Naval Militia, as I have said before, offers an exceptional opportunity to young men who desire to augment their theory by a practical experience in the highest branch of steam engineering, requiring, as it does, one night per week during the winter for drill and quizzes on operating questions. In the summer a two weeks' cruise on a modern man-of-war gives that familiarity with maintenance, operation in emergency, and also the handling of men, which a technical man cannot afford to be without.

Any S.B. can start and stop a large engine or a pump or a battery or boilers, but it requires a life-sized man to keep them running under the difficulties which arise under ordinary conditions.

—And Stearns (I.) has been persuaded to add the following:—

The secretary, after several vain attempts has finally succeeded in drawing from his friend Stearns a meagre and commonplace account of his trip abroad during two months last summer,—not that there was anything especially interesting in it to the REVIEW, but because the secretary had not heard about it first hand himself, and took this means of satisfying his curiosity, and perhaps incidentally padding his contribution to that Tech. editorial.

The trip was most commonplace,—no hairbreadth escapes by sea or land, no journeys into the “Tenderloin” districts of the great cities visited, no romance to cause gossip at home. In fact, the trip was conducted on Puritanical principles throughout, and was more in the nature of a post-graduate course abroad, which wasn’t confined to any one subject in particular.

Sailing from Boston, via White Star Line, on July 5, the good ship “Arabic” encountered nothing but smooth seas for eight days, affording a splendid opportunity for field sports on her broad decks, which was eagerly taken advantage of by a huge field of entrants of both sexes. The south coast of Ireland—the first land sighted—was green as usual, its rugged shore line rising rapidly from the sea till it faded into mountainous heights in the distance, while at its foot the small fishing vessels with their red-painted sails lent a certain harmony of contrast to the scene. Save for a stop off Queenstown to land passengers, nothing of moment occurred till noon of the ninth day, when the ship drew alongside the landing stage at Liverpool and the bustle of travel began.

Liverpool was left, with but a cursory glance for the great metropolis, taking a look at Manchester and its great ship canal on the way. Grim London, after a week, gave place to a week’s outing “en automobile” in the south-west of England, followed by a few days in London to get back to earth again. Then came Paris, Strasburg, Neuhausen, Constance, Munich, Vienna, Dresden, and Berlin in succession, each of the large cities conspicuous for its clean, broad, and generally well paved streets, its fine public and private buildings, its art and historical collections, and perhaps above all, in contrast with the majority of American cities, its

lack of hoodlumism and apparent earnestness of purpose of its younger generation.

With a parting "Auf wiedersehen" from the deck of the "Kronprinz Wilhelm," Germany was left behind, and it was not without a sense of relief that Edinburgh was reached a few days later, where a little "Scotch" could be enjoyed after the struggle with French and German on the Continent. A whirlwind tour of the Scottish Lakes proved both interesting and instructive, making "The Lady of the Lake" take on a reality it never did in the public schools at home. A look into Wales and grand old Conway Castle finished sight-seeing abroad, and the "Republic," as she steamed into Boston Harbor eight days later at sunset, revealed, as a setting for what had gone before, the most beautiful harbor in the whole world."

—And now a glimpse from the Far East:—

My dear Dick,—Unfortunately, your letter arrived at one of my strenuous periods, so that I was not able to answer at once as requested, but I now send you some of the details of life in the Far East. I will begin by saying with Mark Twain that the reports of my death have been much exaggerated.

I sailed from 'Frisco in the United States army transport "Sherman," Dec. 1, 1902. I had not looked for a job in that section of the world, but, as it was offered to me with financial considerations which made the Metropolitan Water and Sewerage Board, for which I was then working, look like thirty cents Mex., I did not see my way clear to refuse.

The voyage was, for the most part, uneventful, though rough. We touched only at Guam for a few hours, so that we were on the water continuously for twenty-eight days.

We first struck the Philippine Islands on December 26, at 10.30 P.M., on a rock in the Straits of San Bernadino. We struck pretty hard and were considerably jolted, but no real harm was done except to the feelings of some of the ladies when they recovered sufficiently to remember the costumes in which they had come on deck. Of these the less said, the better. Anyway, they all had life preservers.

We reached Manila without further mishap at about 2.30 P.M. the 28th. Went ashore, and found a hotel—of a sort—with much difficulty.

I received my first detail as Supervisor of the Province of Surigao, and left for that remote section on January 16, per steamship "Z. Y. de Aldecoa," arriving Surigao January 20.

Some time, when I have a month or so to spare, I will narrate to you just

what were the duties of a provincial supervisor. The office has been discontinued. To put it in few words, he was the provincial goat. To be more precise, he was member of the Provincial Board (the governing body of the province, with the governor and treasurer), which body collected taxes, made appropriations, hired official municipal officers, justices of the peace, etc., member of the Provincial Board of Health, of the Board of Tax Pension, of the Board for the Suppression of the Plague of Locusts, Provincial Engineer and Superintendent of Public Works, janitor of public buildings, guardian of the jail, winder of the town clock, accountable for all public property, purchasing agent, distributor of supplies, member of the Local Civil Service Examining Committee, superintendent of the coal pile, keeper of the pound (commonly known as the Provincial "Fence"), consulting engineer to the municipalities, member of various Boards of Survey, etc., etc. In his spare moments he was expected to acquire all sorts of miscellaneous information, and be ready at a moment's notice to deliver facts, opinions, and statistics on length and navigability of rivers, birth-rate of chickens, manufacture of ardent spirits and textiles, comparative immorality, species of timber, hemp presses, diseases of live stock, value of g, mineral deposits, and to decide questions of town boundaries, ownership of lost, strayed, or stolen cattle, settle the domestic disputes of the office boy, and various other duties. The above is no idle dream, but cold facts, and it had to be done usually in Spanish—a language which I never studied—or in any one of several hundred nations' dialects which I never tried to learn,—couldn't.

Surigao is on the north-east corner of the Island of Mindanao, $9^{\circ} 50' N.$, $125^{\circ} 30' E.$ The province covers an area of 13,000 square miles (about the area of Massachusetts and Connecticut), has thirty odd towns, five miles of road, and a population of 85,000 (about that of the State of Wyoming or of Richmond, Va.), which is divided among forty odd tribes,—Visayans, Manobos, Monteses, Mamannas, Bagobos, and the like. Transportation is mostly by water, and most of the country has never been seen by a white man.

I arrived in the tail of the big cholera epidemic, got all of it that I wanted, and my first job was the stamping out of an epidemic of small-pox. This latter I accomplished by the simple and direct means of girding on my trusty Colt 44 and personally vaccinating the whole population, searching the houses for cases, and shooing those that had it off to quarantine. Every native in that section thinks that I am a doctor, and they used to come to me with all kinds of ills in consequence.

On the 23d of March, 1903, the provincial capital, Surigao, was entered by some two hundred bolo-men, savages, escaped convicts, and others under Adriano Concepcion, Eduardo de los Santos, Vincente Atillo, and others. They came in at 12.30 P.M., scattered a force of fifty armed constabulary (natives), captured their arms, killed their chief, Captain Clarke, who was eating dinner with me when the attack was made, and tore up things generally. I was unarmed at the time, and they refrained from killing me, because they were not anywhere near my class when it came to a rapid sprint. So much for Tech. athletics. I got my six-shooter, and with three other Americans tried to jump the outfit. They found us with a number of volleys down an open street at some sixty or seventy yards' range, but were unable to hit anything except the atmosphere. We then retired to the "Palace," and barricaded, but somehow we had managed to throw such a bluff that they did not dare to come near us. The defenders were eight in number, two of them women school-teachers; and we were very badly armed. There were several hundred of the "Tulisanes," armed with Springfield carbines, but you remember the lectures we used to get on the military advantages of a bluff. Fortunately, we held the end of the cable, and were relieved from Tactoban the next morning. Troops were rushed in, and the boys in the blue shirts, with the long brown guns with carving-knives in the ends, very promptly put that little insurrection in the blink. Six of the leaders were hanged and some sixty of them are now doing time in Bilibid for their crime. How many went the way of a man who stops a bullet will never be known, but there were a good-sized mob, I imagine.

After the dust had cleared somewhat, I took a trip down the east coast. Was received by a brass band at each town that I entered.

In August, 1903, I was transferred to the Province of Cavite. Here I had a lot of road construction on hand, also nothing but rice to pay for my labor. Rice is a very poor kind of currency, and I had a time, but succeeded in getting a good stretch of roads into moderately passable condition.

Cavite was overrun with various kinds of bandits at this time, but they did not bother me for some reason, although I went to a good many places that I should have kept out of, with no company other than my 44 Colt and my little horse.

In the following May I was transferred to the Bureau of Engineering, and sent to the Island of Negros to make a survey for some seventy miles of proposed road. This took about five months, and was strenuous labor. Most of it was on the slopes of the Volcano Canlaon (8,000 feet), among a maze of barracades and canyons, and was made in the rainy season. One

night we filled a 10" rain-gauge, so you may imagine that it was coming down some.

In December we returned to Manila, and were sent off again to Cebu. There I surveyed several miles for roads across the island. One of these was building when I left.

In March, 1905, I was detailed to the Cebu Harbor Works, and was employed in that job for the remainder of my stay. Finished up the preliminary surveys, soundings, borings, cement testing, etc., made plans, and chased inspectors and contractors. I was invited to stay and finish this work, but thought that three years straight were about all of the tropics that were coming to me, and so chucked the job.

I left Manila January 26 for Hong Kong, where I took James J. Hills's "Dakota," and came back via Shanghai, Nagasaki, Kobi, Kyoto, Tokio, Yokohama, and Seattle, reaching New York March 11, 1906.

I found the Islands interesting and healthful, enjoyed my stay there, and do not want to go back. The Little Old United States is good enough for me, thank you. Nevertheless, it is a great country, and will amount to a good deal when they stop playing politics out there. The country is all to the good, but the population is about the limit. If one of the true Filipinos was up against a situation where he had to do a whole man's work, he would just incontinently die off, and would not hesitate in the process.

At present I am working for the Board of Water Supply in this place, and expect to be thus employed until some one wants me elsewhere more than they do here.

For the rest I am still sane, solvent, sober, and single, and glad of it.

Ever yours,

R. SUTER.

1901.

R. H. STEARNS, *Sec.*, 15 Beacon Street, Boston.

Now and then in the course of his work a sort of lonesome feeling comes creeping over a class secretary, and then again he is cheered by the chance meeting of some classmate who is visiting in Boston from a home elsewhere. It is thus the secretary has recently encountered L. P. Wood, W. G. Wildes, and Sumner Hazelwood, all of Course I. and all at work in the "Empire State." Wood is now assistant designing engineer for the hustling New York Board of

Water Supply. Wildes is assistant engineer on the Barge Canal, and Hazelwood is with Purdy & Henderson, now engaged on the design of steel work for the Pennsylvania Railroad Station in New York. Happening into the auto show, the secretary ran into E. B. Belcher (II.). Belcher showed conclusively that the Berkshire automobile, which he builds, was the best all-round car on the road; and far be it from the secretary to argue this point. And what Belcher does not know about autos E. S. Foljambe (II.) will tell you. As managing editor of the *Horseless Age*, Foljambe knows every detail of the automobile and automobiling. Again, threading his way among the human streams that flow through Jordan-Marsh's dry-goods store, the secretary came upon A. W. Rowe, single, alone, and happy. Rowe has chosen the teacher's life, and is looking forward to another trip abroad during the coming season.—Archibald L. Klieves (IV.) spent a couple of months abroad last fall, and is now established in the firm of Franzlein & Klieves, Wheeling, W. Va. They are architects for a seven-story hotel and a nine-story office building, among other structures.—R. S. Loring (I.) and F. D. Chase (I.) are both trying their hands at architecture, Loring out in Lewiston, Ida., and Chase on the Illinois Central Railroad.—A. W. Peters (I.) is assistant engineer for the Consolidated Water Company of Utica, N.Y., and reports himself busy and happy.—R. W. Bailey (XIII.) is draughtsman at the Brooklyn Navy Yard, and is enjoying life in a home overlooking New York Bay. His one-year-old boy has been nicknamed "The Little Corporal," and certainly no child has a better claim to that title. We shall hope to see him at M. I. T. before a score of years.—C. F. Willard (II.) is instructor in marine engineering at M. I. T., but that is not all. He has been studying law at the Boston University Law School, and has lately been admitted to the bar. Of course, while we were yet Freshmen, some of our class were admitted to the bar through that Gothic portal across Boylston Street, but Willard deals in a different kind of goods, and is the first of our class to undertake this dual rôle.—Charles F. F. Campbell (IX.) is now superintendent of the Industrial Department of the Massachusetts Commission for the Blind, the work he commenced having been taken over by the State.

He is running a miniature factory for the blind during the day, lecturing on the blind in the evening, and edits a quarterly magazine for the blind on the side. In other words, he is fully Americanized.—F. H. Bass (I.) is now engineer of the State Board of Health of Minnesota, in addition to his assistant professorship in the University of Minnesota. —G. C. Peterson was married on Jan. 10, 1907, to Miss Ada Katharine Wood, of Lexington, Mass.—Edward Seaver, Jr. (II.), is engaged to Miss Grace A. Whitman, of West Newton, Mass.—Perkins Boynton, G. A. Hall, and John Alden Trott are also engaged.—The secretary hopes to have some class statistics for the next issue of the REVIEW.

1902.

F. H. HUNTER, *Sec.*, Johnson City, Tenn.

Circulars containing reports and general information were mailed March 12 to the members of the class, and the secretary is pleased to report that the responses from a large number of the fellows have been most hearty, and we hope the others will swing into line right away. Plans are being worked out for the celebration of our fifth reunion next June, and circulars giving full information will be mailed to the class in due time. The following notes will be of interest: Hervey is now located with the Gould Storage Battery Company, Rookery Building, Chicago.—Hammond's address is 106 Morris Street, Yonkers, N.Y.—The following is clipped from the *Engineering News* of March 27: "Messrs. Herbert L. Sherman and Robert S. Edwards have formed a partnership under the firm name of Sherman & Edwards, chemists and chemical engineers, 12 Pearl Street, Boston, Mass. They will make a specialty of investigating cement and lime properties and designing and improving plants manufacturing these materials." The firm of Sherman & Edwards is doubtless the first engineering firm composed entirely of '02 men.—C. L. Wright is located at the fuel testing plant of the United States Geological Survey, St. Louis.—Paraschos has been located in Newark, N.J., where he is works' engineer for the Atha Steel Casting

Company. Since graduation Paraschos has made two trips to his home in Athens, one in 1902 and one in 1906. In 1903 and 1904 he was with the Louisville & Nashville Railroad. Started as rodman, later being promoted to assistant engineer of the Baker Hill Division, and while there had supervision of the Ridge Top Tunnel, 4,600 feet long. In 1905 became assistant engineer on the Pittsburg filtration plant, which position he held till May, 1906, when he went abroad, and soon after his return located at his present position in Newark. The secretary had not expected to run across many '02 men in Eastern Tennessee, but was delighted to have Paraschos drop in here a few weeks ago.—Goldenberg has an interesting communication in the March 16 issue of the *Engineering Record* regarding recent failures in reinforced concrete. Goldenberg lately visited the Pacific coast, investigating a concrete failure at the Bixby Hotel at Long Beach, Cal., and also made a study of structural conditions in San Francisco and other places.—Archie Gardner is now at Summerville, S.C.—Egan's address is Sylacauga, Ala. He writes that he expects to remove about May 1 to Amboy, Ill.—Wadleigh is on the United States steamship "Louisiana," and at last writing is at Fortress Monroe. He has recently been promoted to the rank of captain, United States Marine Corps.—'02 was represented at the annual dinner of the North-western Alumni Association at Chicago, March 2, by Foote, Lockett, L. E. Williams, and Pendergast, who made proper mention of the fact that '02 was there.—Lockett left Adams & Schwab last October, and is now mechanical engineer for the Electrical Installations Company, Monadnock Building, Chicago, Ill. His work is largely in connection with the electric railroads and transmission plants.—Williams is assistant engineer with the Great Lakes Dredge and Dock Company, Chamber of Commerce Building, Chicago. He is added to our list of "proud and happy" fathers. His first daughter, Harriet I., was born Nov. 6, 1905, and a second daughter, Gertrude, was reported on February 26 of this year.—Ballard is also among the '02 men who have scored twice. His son, William Whitney, was born April 4, 1906.—F. B. Montgomery reports a daughter, Eleanor, born Oct. 11, 1906. His home address is 52 Chestnut Street, Cambridge, Mass.

—C. A. Sawyer, Jr., is back in Boston with the Andrew D. Fuller Company, and is living at Waban, Mass.—A. A. Jackson is chemist for the Zephon Chemical Compound Company of Chicago.—Starr is another member of the class whose family history has hitherto been concealed from the secretary. We find that he was married on June 10, 1905, to Miss Alice F. Sherman. He is located with the Barstow Stove Company of Providence, R.I.—Miss Hill left the office of Percival Lowell, the astronomer, last fall. Her present address is Bourne, Mass.—R. Van B. Blaisdell has been located. He has been ranching at Junction, Wyo., but expects to make Coeymans, N.Y., his permanent address in the near future.—Arthur F. Butler is with the Lowell Electric Light Company, 28 Bridge Street, Lowell, Mass.—Ned Baker claims the title of "Class Hobo," having visited thirty-nine different States since 1902. If any member of the class can better this record, he is requested to report to the secretary at once and get the "bun," which will otherwise be awarded to Ned. Your secretary has also to report a move, being now located as construction manager of the Unaka Company, Johnson City, Tenn., and is working with W. P. R. Pember, who is architect and landscape engineer of the same company, as well as for the South & Western Railroad. Together they expect to work out some interesting problems in street and sewer layout and building construction. Pember, before leaving Buffalo, submitted plans in competition for the New York State Library at Albany, in association with Martin C. Miller, of Buffalo. They were selected by the judges as one of the ten firms to enter the final competition, which closes April 1. They received a prize of \$500, and are paid \$1,000 for making final plans. As there were over sixty architects entered in the original competition, some of them among the best known in the country, the win of Messrs. Pember and Miller is particularly creditable.—C. A. Smith is now located at Ontonagon, Mich., with the Nonesuch Mine of the Calumet & Hecla Company.—F. J. Eager is now in Boston. Address 15 Beacon Street.—F. B. Galaher is with Stone & Webster, 84 State Street, Boston.—D. M. Belcher is on the Sewage Purification Works, Washington, Pa.—Manley is

at the Stony Wold Sanitarium, Lake Kushaqua, N.Y. He has overcome the danger of tuberculosis, which sent him to the Adirondacks, and expects to leave in a short time. His permanent address is 116 Mount Vernon Street, West Roxbury, Mass.—Kern has returned to this country from Manila, and is now at 2004 F Street, N.W., Washington, D.C.—A. H. Sawyer is with the Keweenaw Copper Company, Delaware Mine, Mich.—Fitch expects to leave Dayton, Ohio, in April. His permanent address is 48 Union Street, Rockville, Conn. The secretary has just learned of Fitch's marriage on Oct. 17, 1905, to Miss Nellie M. Keister, of Clinton, Ia.—Hooker is located with N. W. Harris & Co., of Boston.—Wright was married February 9 to Miss Helen Lenore Coffin, of Newcastle, Ind. This summer he will be at the Jamestown Exposition for the Geological Survey.—Weeks is with Norton, Megaw & Co., Rio de Janeiro, Brazil.—Walter O. Teague was married February 12 to Miss Jane Teresa Neilan, of Hamilton, Ohio. They are at home at Columbia Flats, LaFayette, Ind.—Before this reaches the class, Kellogg will have joined our army of Benedicks. His marriage is announced for April 6 to Miss Clara Howard Davis.—William Warren Garrett (III.) died at San Antonio, Tex., Jan. 15, 1907.—“We chronicle with regret the death of Francis J. Field, which took place Jan. 27, 1907.”

The secretary has received some startling facts in response to the requests on the circulars which he recently sent out to the class asking for “remarks and general news.” Capen reports from Omaha that Governor Sheldon has signed the two-cent rate bill, while Greeley reports that government ownership of public utilities is certainly coming. These matters are of vital importance to the well-being of the class.—Chicago, however, takes the cake as usual, for Pendergast reports that his wife's name will be Mrs. R. B. Pendergast, and at his request we are holding this startling bit of information in the strictest confidence.

1903.

WALTER H. ADAMS, *Sec.*, Polytechnic Institute, Brooklyn, N.Y.

In response to the letters and bills sent out the first of the year about seventy replies have been received. The secretary is now busy with a scheme of reorganization which may be sent out before this number of the REVIEW. An informal dinner was held in Boston on February 9. M. H. Clark, Fales, Howard, Newman, Nutter, Olmstead, and Swett were present. The reorganization of the class was discussed, but no action was taken.—Only a few bachelors have had the courage to try double harness during the past year: Harlow was married to Miss Ethel May Harlow on Oct. 18, 1906.—Loughlin to Miss Grace E. French on Aug. 22, 1906.—Millard to Miss Helen Mae Brown on June 18, 1906.—Sumner to Miss Lucy Eleanor Allen on Nov. 12, 1906.—Underwood to Miss Cleve Elbertine Lozier on Sept. 25, 1906.—Harris wrote that he was to be married on March 2 to Miss J. Winifred Lombard, of Kansas City, Mo., so is now probably on his honeymoon.—The class babies have increased by one this last year. Master Edward Harding Sibbett joined them on Aug. 1, 1906.—F. G. Cox writes from London that he is engaged in erecting one hundred and forty large elevators on the Underground Electric Railway System, of London, but expects to return to New York in August. He also says, "England is pretty nice, but it isn't U.S.A."—Place writes from Oaxaca, Mexico: "Have established the only American engineering office existing in Southern Mexico, and am branching out rapidly. Glad to give any information about this rich and booming country." He is a member of the firm of Place & Elton, consulting civil and mining engineers, at the above address.—Aldrich has sold his business to the Mianus Motor Works, and is now assistant manager of their Boston branch at 7 Commercial Wharf, Boston.—The following changes of address and occupation have been received: Ancona, 176 Spencer Street, Rochester, N.Y., is chief draughtsman for the Eastman Kodak Company.—C. L. Bates, Kenora, Ont., care W. A. James, Div. Eng., is resident engineer in the construction department,

C. P. R.R.—Bradshaw is at 363 Grand Avenue, Brooklyn, N.Y.—Buhler is in Kingston, Mass.—G. H. Clark, 20 Rockland Avenue, Malden, Mass., is overseer of grinding department of the Boston Rubber Shoe Company.—Foster, Astoria, L.I., is assistant superintendent with the Astoria Light, Heat, and Power Company.—G. H. Gleason, 606 Connecticut Mutual Building, Hartford, Conn., is in the brokerage business.—Harlow, 618 Cator Avenue, Baltimore, Md., is with M. L. B. Stilwell, consulting engineer.—Kearney, New Haven, Conn., care N. Y., N. H. & H. R.R., is an electrical engineer with that road.—Lyon, 3543 Indiana Avenue, Chicago, Ill., is a sales engineer with the Otto Gas Engine Works.

1904.

CURRIER LANG, *Sec.*, Michigan Central Depot, Detroit, Mich.

Since the last issue of the REVIEW the following information has been received through letters from members of the class.—E. F. Allbright is still with the Southern Railway at Washington, D.C.—W. S. Anthony writes that he saw Joe Crowell, '04, at the Auto Show in New York. Crowell is in the auto business in West Newton. He also says that Hamilton from Montana, who failed to get a degree after five years, is back after it again. Langley is still in business with his father in Waterbury, Conn.—P. M. Arnold is with the United States Metals Refining Company of Chrome, N.Y.—J. F. Card states in a letter that he is in Butte, Mont., and has been there since Thanksgiving. He was working then in the 1,400 feet level of the Pennsylvania Mine of the Boston and Montana Company, but was expecting to go on the engineering corps in a couple of weeks.—C. F. Barrett is an assistant engineer with the Electric Vehicle Company of Hartford, Conn., and has been with them since graduating, having gone through all departments of the factory. The Technology Club of Hartford is doing well, but hasn't as many '04 men as it had when it was organized two years ago.—A. M. Holcombe is in the patent department of the Pope factory at Hartford, and is conducting the Y. M. C. A. school of auto construction which

Barrett ran last year. Barrett says that, so far as he knows, he and Holcombe are the only '04 men in the auto business, but Joe Crowell and Broad are in the same ranks. Barrett continues:—

Let me say right here that there is no line of work more intensely interesting and pleasant than the automobile business, as in the large amount of testing and experimenting it gives one a fine opportunity to ride around and see the country. I figure that I have made a total mileage in automobiles of nearly 40,000 miles, covering nearly all of New England, New York, New Jersey, and as far north as Montreal and Quebec. It's great sport.

—Lewellyn Bixby writes:—

I have heard no news of any of the class for a couple of years, so am afraid I can't help you out much in that line. So far as I am concerned, I have done no engineering since graduation. I read law for a few months, and, my father's estate then having been settled up, I moved here to Long Beach (Cal.) to look after the property interests of my sisters and myself, which centre here. These interests lie mostly along the line of farming and cattle raising, with some real estate dealing on the side. You will, perhaps, remember that I was married some time before entering Tech. Since coming to this neck of the woods, I have had a daughter born, Aug. 2, 1905.

—In a letter from Bernard Blum he says:—

March 1 I left Chicago, and set sail for St. Paul, bound for the Northern Pacific Ry., whence I had received a most favorable offer as assistant engineer in charge of construction of a large country yard in Montana. I came on immediately to Laurel, a small village 15 miles west of Billings. I have a party here, and we are making a survey of the location three miles long and one-quarter of a mile wide. It will consist of a very large gravity yard, with round-houses, shops, etc. I expect to be here about a year and a half. This is the first change I have made since I left Boston.

—Charles Francis Underhill, Course X., of Dorchester, has been appointed chief chemist for the California and Hawaiian Sugar Refining Company.

1905.

ROBERT H. W. LORD, *Sec.*, 248 Tremont Street, Newton, Mass.

The annual 1905 dinner was held on March 1 at the Hotel Bellevue. There were thirty-six present, and of these a good many were men away from Boston or who had not been with us for three or four years, including Ellis Wood, our baseball captain, Louis Booth from New York, Robbins, recently returned from Korea, Anderson, Nelson, Young, and many others whom we have not seen much of. The Bellevue people did well by us, and in that respect it was the most successful of our dinners. Letters were read from men from far off, and a "straw vote" showed that it was more expensive to procure an '05 man this year. The average of the men showed a salary of \$94.70 a month, minimum \$50 a month and maximum \$165, two at \$150 and two at \$125, and six below \$70. We had a piano that sounded like the Freshman band, but Pirie can make almost anything go.

The secretary very unexpectedly started on a trip to Mexico on February 20, thus making it impossible to attend the class dinner. I only had a week's notice, so that it was almost impossible to get word to the fellows in Mexico to see if they could not meet somewhere *en route*, as mails there are slow and telegrams are not bothered to be delivered. We went through Eagle Pass, and stopped at Torreon first. Then direct to Guanajuato, the mines at that place being the object of our trip. Nothing can describe that quaint old city, which in 1800 was the second largest in the western hemisphere, with its fine old haciendas (the last relic of the patio process), its narrow streets, fine buildings and parks, mixed in with mud houses and pigs, and, queerest of all, the Mexican Peon walking around with his bright-colored serape wound around him, even on the hottest day. The mines are in the mountains, which form a solid wall around the city, and here are the famous old Valenciana and Raya mines, and several hundred others, large and small. Years ago operations were suspended in the Valenciana and Raya mines, as, after the shaft was sunk to the 1,500 feet level, water gathered in the mines too fast for them to be profitably worked.

But now, with modern machinery from the States, those mines are recommencing operations, and probably will again turn out their millions. We were particularly interested in the Guanajuato Development Company's properties, and their latest, the Pengnico, shows large amounts of gold and silver bearing ore. Their Perigrina mine and mill of 120 stamps were in full operation, the mill taking care of the new ore and working up the old dumps which the cyanide process now makes profitable. Everything is at present carried on mule teams and burros, but soon the Development Company is to build a railroad through the mountains, connecting the various mines and mills. Six years ago there were six Yankees there. To-day there are five hundred, principally connected with the mines. In all those I was not able to find an Institute man. Leaving Guanajuato, we went to Iripuato, Guadalahara, Mexico City, Cuernavaca, Orisaba, and then north through Monterey. At San Antonio I looked up W.E. Simpson. He was rather surprised to see me, and the office of J. Flood Walker was closed immediately. He was much interested in class news and general Institute affairs. He seems to be getting on well, and had just finished a ninety-foot wooden span over a skating rink. He is the only engineer in the city, and, considering its rapid growth, should find plenty of engineering work. At Galveston we saw a rather novel engineering feat,—that of raising the whole city six feet. Sand mixed with water from dredges in the canal is pumped through pipes over the land, and, after the sand has settled out, the water runs off. The great sea wall is also another big piece of work. Stone & Webster operate the street railway there, and keep it going despite the filling in.

I am now in a very responsible position (filing letters and snagging blue prints) in the electrical department of the New York Central. New York is a great town, if you say it fast. The bridge jam has the Technique rush lashed to the mast. I occasionally see a Tech man down here, and very rarely a 1905 man. I saw Ros Davis the other day. It seems to me he is getting fat.

BUSH.

Bush has consented to take up the task of getting the New York

'05 bunch together. Here's hoping the fellows buck up and show some life.

I am glad you published the date of the dinner of the Boston Club of '05, for many of the fellows hope to get back to Beantown some time, and the prospect of meeting some of the crowd would be an inducement to come on that date. Did you hear of the reunion and dinner of the '05 fellows in this part of Mexico, held in Parral on Christmas Day? Charlie Johnson came up from Jiminez, and Bill Motter in from Santa Barbara, while the undersigned saddled his little horse and came in from sixty-five miles beyond the end of the railway. We had a jolly good time, and were sorry the vacation allotted to each was not longer. Burton is now in Santa Barbara, so there are four of the '05 Course III. crowd within a day's travel of each other. All of the '05 men in this country seem to be doing well.

ROY H. ALLEN.

I am right on hand with a claim on the title of class baby for my son James M. Barnes, born Dec. 31, 1906. If any one claims priority over him, I shall still be at the head of the list, I am sure, by reason of his sister, Milla E. Barnes, born also Dec. 31, 1906. So, if I haven't the class baby, I have at any rate the class twins, and claim consideration for them.

The West Shore (Utica to Syracuse) is approaching electrification at a good clip, and there is plenty to be done in connection with it. Draughting, computation, estimates, inspections, and test afford a pretty good variety, and I am getting a taste of all of them, so have no kicks coming with life or the world. Besides, I find that a pair of twins in the house don't leave much time for consideration of outside topics.

JAMES P. BARNES.

To date Jim has the only boy that we have heard of, and fulfils the requirements, having been married the 3d of January, 1906.

I am in the engineering department of the Trenton Iron Company, draughting, but like the job and find the work instructive. This company builds about 70 per cent. of all the wire rope aerial tramways put up in this hemisphere. Customers are mining and milling coal and fertilizer cranes, etc. One line in Hayti carries bananas.

STUART W. BENSON.

Benson's address is 48 Chestnut Avenue, Trenton, N.J.—The engagement of Carl E. Danforth was announced last fall to Miss

Carrie M. Goodall, of Bangor. Danforth has given up mining and gone into business in Bangor.—At the Greater Louisville Exposition Ned Jewett is engineer in charge of loading floors.—“Beverly’s Baby City Engineer.” Under this title the Boston Sunday *Herald* made a “feature” article of Harry Whitney’s latest success. For over two years Whitney has been the engineer of the sewer department of Beverly, and has planned most of the sewers built during that time. On February 1 he was appointed city engineer; and, to quote the *Beverly Times*, “the new city engineer is a bright, aggressive young man, has ideas of his own, and has every opportunity to make good in a berth which is regarded as one of the most lucrative in the city.”—Jim Lambie left the Lackawanna Steel Company in the middle of April last, and formed with a cousin the contracting firm of C. S. Lambie & Co., securing a large contract to line with concrete a tunnel for the Wabash Railroad. This partnership has dissolved, and Jim is now assistant superintendent of the Charleroi plant of the Pittsburg Plate Glass Company. He calls it a “dandy job,” and confesses that they have “raised the ante.”—On Oct. 18, 1906, C. A. Anderson was married to Miss Mabel C. Ray.—Chester Allen is now instrument man on the C., C., C. & St. L. Ry., with address at 1216 Main Street, Mt. Carmel, Ill.—S. H. Ayers is now with A. D. Little, 93 Broad Street, Boston, taking charge of the bacteriological laboratory which Mr. Little has just started.—W. S. Ball was married to Alice H. Paul on June 16, 1906.—Edward A. Barrier is instructor in analytical chemistry at the University of Cincinnati.—William H. Beers, Jr., is chemist and bacteriologist at the filter plant, Columbia, S.C.—Frederick G. Bennett is assistant engineer, Board of Water Supply, City of New York, address Babylon, L.I., N.Y.—Eugene Burton, address Minas Tecolotes y Anexas, Santa Barbara, Chihuahua, Mex., on engineering staff.—S. A. Caine, address 369 Harvard Street, Brookline, assistant engineer for Submarine Signal Company.—On April 18, 1906, W. D. Clarke was married to Miss Mary Bailey. Clarke is assistant engineer for the Western Pacific Railway Company.—W. P. Delano, Jr., is an architectural draughtsman at 121 Newbury Street, Boston, and he is living at 18 Channing Street, Wor-

cester.—John Douglas lives at 301 Huestis Street, Ithaca, N.Y., and is an instructor at Cornell.—Bob Farrington is now at the Harvard Law School.—Joseph C. Field is engineer for the Western Electric Company, address 321 West 22d Street, New York City.—T. H. Files was married on April 30, 1906, to Miss Alice A. Newlin.—A. Fisher, Jr., is chemical engineer at 164 Front Street, New York, home address East Side Branch, Y. M. C. A., 153 East 86th Street.—L. V. Fuller gives his occupation as shoe manufacturer, address 26 Vine Court, West Lynn, Mass.—A. P. Gerry, 149 West 126th Street, New York City.—Carl Graesser is now plant superintendent, factory L, International Silver Company, at Wallingford, Conn.—J. T. Glidden is assistant editor of *Engineering and Mining Journal*, 505 Pearl Street, New York, N.Y.—Selskar Gunn is bacteriologist of Iowa State Board of Health and lecturer on hygiene in the State University at Iowa City. He expects to be in Boston about July 1, *en route* to Europe.—R. M. Harding is now with Stone & Webster, address 42 Youle Street, Melrose.—Percy G. Hill is at New Haven, Conn., with S. N. E. T. C.—E. L. Hill was married on Dec. 20, 1906, to Miss Gladys B. Patterson, Lasell Seminary, 1904. He is now assistant engineer for the American Steel and Wire Company, Worcester, Mass.—In September Arthur H. Howland announced his engagement to Miss A. R. Smith. He is doing architectural draughting, address 353 Carlton Avenue, Brooklyn, N.Y.—S. T. Hyde's address is Box 705, Ensley, Ala., engaged in draughting.—H. L. Jackson is instructor at M. I. T.—A son, George Stuart Jason, was born to George Jason, Jr., on Dec. 25, 1906.—S. B. Joslin is engaged in heating and ventilating engineering around Boston.—Bill Keen has changed his address to 406 Locust Street, Philadelphia.—Hurb Kenway writes that George Jones comes over quite often with his fiddle, and he and Mrs. Kenway "tear things up to beat the band."—E. F. Kriegsmann is now assistant engineer on U.S. R. S., address River Portal, Col.—Eugene Lombard was married on Nov. 26, 1906, to Miss Margaret G. Ewing, and is now an inspector at Fair Oaks, Pa.—C. A. Lord has now changed his address to 207 Industrial Trust Building, Providence, R.I.—T. P. Moorehead's address is now

Richmond and Harriet Streets, Cincinnati.—D. H. Nicholson was married on Nov. 7, 1906, to Miss Carrie M. Cox, address 20 Gay Head Street, Roxbury.—H. W. Olmsted is assistant engineer, New York Board of Water Supply, located at Valhalla, N.Y.—A. G. Prescott is with the Whitlock Coil Pipe Company, 11 Buckingham Street, Hartford, Conn.—Charles R. Prichard was married on Oct. 22, 1906, to Miss Marion C. Mudge.—P. J. Ralph is now draughtsman for New York Shipbuilding Company, 434 Penn Street, Camden, N.J.—Miss Grace Raymond was married to Mr. George F. Leslie on Jan. 3, 1906, and lives at 1050½ Washington Street, North Abington, Mass.—W. S. Richmond, 33 Campau Building, Detroit.

Wish I could get down for the dinner; but who would sweep out the corners of the office while I am gone? Whitcomb, '05, is up here, and we have formed a 1905 Club of Albion, N.Y. We have your Boston Club beaten, for we have a dinner every day, and it is seldom that the whole membership does not turn out. Here I quit this writing, not because I have run out of things just burning to be written, but because I've a boss.

BILL GREEN.

Bill is doing odd jobs around J. G. White & Co., Electric R.R. contractors, and has recently become engaged to Miss Ruth Wilder, Vassar, '07, of Lowell. His address is 157 Bleeker Street, Gloversville, N.Y.—Louis E. Robbe, inspector, East River Tunnels, 345 East 33d Street, New York City.—E. G. Schmeisser, assistant engineer, Penn., N.Y. & L.I. R.R., 10 West 128th Street, New York, N.Y.—R. W. Seyms, 4217 Fifth Avenue, Pittsburg, Pa.—Chester R. Shaw, with Massachusetts Electric Company, 5 Chester Avenue, Brockton, Mass.—F. W. Simonds was married on Sept. 17, 1906, to Miss Ethel R. Paul. He is now bridge inspector, 606 Central Avenue, Albany, N.Y.—S. A. Smith, with Jamestown Cotton Mill, 500 East 6th Street, Jamestown, N.Y.—Sid Strickland reports a girl, Jane Strickland, born last summer.—A. E. Tadgell is now at 222 Boylston Street with the Bay State Trust Company.—R. E. Tarbett is bacteriologist, Knoxville Water Company, Knoxville, Tenn.—A. O. True's address is 1503 Farmers' Bank Building, Pittsburg.—LeBaron Turner, with United States Wind Engine and Pump

Company, Batavia, Ill.—Waldso Turner, general superintendent, Iron City Engineering Company, 1173 Frick Building, Annex, Pittsburgh, Pa.—H. H. West, 23 Journal Building, Boston, fire-proof construction.—Horatio Whiting, assistant examiner, Patent Office, 21 Sixth Street, N.E., Washington, D.C.—A. L. Whitmarsh, with Holly Sugar Company, Holly, Col.—R. E. Wise, transitman, Charles River Basin Commission.—Ellis G. Wood reports the birth of a daughter, Margaret True Wood, on June 4, 1906.—B. A. Yoder was married on Oct. 24, 1906, to Miss Mabel Coolidge.—Charlie Adams is with the Union Water Power Company, Lewiston, Me.—R. O. Marsh, after a period of study in Switzerland, has been at work on railroad construction in various parts of the Far East, and has recently set out for similar work in the interior of Bolivar. Dick has a nice mustache.—A. J. Amberg is purchasing agent for the Amberg File and Index Company, 438-452 Fulton Street, Chicago.—The '05 Quakers had a dinner at Hotel Windsor at 7.30 P.M., Jan. 3, 1907. The '06 men are now enrolled with the '05 Quakers, so that the name of the club is now the Tech Quakers. All men in Philadelphia look up H. L. Walker, 1730 Tioga Street.—John A. Meggison is now at 71 Hancock Street, Boston.—W. M. McBriar, 1710 Green Street, Philadelphia.—R. D. Emerson was married to Miss Minnie Viola Thayer on Tuesday evening, October 30, in St. John's Episcopal Church, Worcester.—G. D. Marcy is assistant to the chief engineer of the Lamson Consolidated Store Service Company, 161 Devonshire Street, Boston.—O. C. Merrill was married to Miss Elizabeth B. Watson on Wednesday, October 17, at Winchester, Mass. At home at Berkeley, Cal.—P. E. Hinckley is still in the paper-making business at Cumberland Mills, Me.—From Lane Schofield, W. Va., we have the following:—

Everything here is booming and about the same as usual. Guess that I will stay here for a while yet. Like the work very much, but the country is pretty hard. Get out in civilization once in a while.

—J. R. Damon has left the Chicago Telephone, and is again in Boston.—Lyon and Crane of VI. have formed a firm with a Wiscon-

sin man for doing electrical testing in connection with their Institute work. Lyon is also doing other outside work.—H. A. Wentworth is now doing development work in mining machinery with C. H. Huff, 60 India Street, Boston.—Bruce Hill is still with his father in the lumber business in Pittsburg. He has just recovered from an operation for appendicitis.—Jack Holiday is foundry expert for the Atlas Engine Works in Indianapolis.—Charlie Dean is with the Buffalo Forge Company, in charge of their Pittsburg office, where he is reported as “making things go.”—Ros Davis’s nearest approach to naval architecture is still a hole under the East River, where he is “sand-hogging” in the East River Tunnel.—Norman Lombard is chief clerk in the Corn Belt Bank, and was a delegate to the Republican County Convention.—E. T. Steel is in Porto Rico for Stone & Webster of Boston.—H. R. Robbins is manager of the newly organized New Hampshire Concentrated Milk Company, which is about to start under a new patent process from which the management hopes will be made radical changes in the milk business of large cities.—Fred A. Pirie (II.) is doing contracting and building work in the district north of Boston.—H. S. Walker, Jr., writes that he has been in a lumber camp in Colorado, on a railroad locating party in Wyoming, and is now studying in the civil engineering department of the University of Colorado.—Alden Merrill is assistant chemist for the Coe Brass Works, address 74 Litchfield Street, Torrington, Conn. He complains bitterly because Torrington “isn’t near anything,” and he is sure that it is criminal to make a man get to work at 7 A.M.—C. R. Adams is now with the Union Water Power Company, Lewiston, Me., doing hydraulic engineering work. He has been down in North Carolina for J. G. White & Co. He found B. L. Johnson working in the Carolina Coast region on the United States Geological Survey.—Eliot Lum is with the Griffin Wheel Company, Chicago.—Galt F. Parsons is with the Terre Haute Traction and Lighting Company, Terre Haute, Ind.—W. N. Munroe is with the Dallas Electric Light Company, Dallas, Tex.—Frank M. Carhart, civil engineer, Boise City, Ida.—Arthur C. Long is now with the American Chlorine Company, 15 Exchange Street, Boston, Mass.—The expenses of the class from graduation

up to March 24, 1907, have been \$119.59. Receipts have been \$295.84. This leaves a balance of \$176.25, which is on deposit at the Beacon Trust Company, Boston.—We have just received a letter from Bill Motter, asking that all Tech men who are in Mexico send him their names and addresses, so that they can get together on occasions similar to the Christmas Day in Parral.

1906.

THOMAS L. HINCKLEY, *Sec.*, 745 Osceola Avenue, St. Paul, Minn.
ANGELO T. HEYWOOD, *Res. Sec.*, Mass. Inst. of Technology, Boston.

Plans are under way for our first annual class reunion, to be held Commencement Day. A committee will arrange for headquarters to be open Tuesday, June 4, for registration and reunion, and a simple spread will be provided during the day. The first annual class dinner will be held in the evening, after which the class will go in a body to participate with the other classes in the "Tech Night at the Pops." In May a letter will be sent out to the class giving full details, reply card, etc. If early application is made by members, balcony seats for the ladies can be reserved in one block.

In this May letter the question of what disposition shall be made of our fund will be put to the class. Two suggestions are:—

- (1) A permanent gift to a scholarship fund, or
- (2) The establishment of a permanent class fund to be in charge of and conserved by a fund committee, consisting of three members, one elected each year to serve three years.

In the May letter a definite form of constitution will be submitted for the consideration of the class.

A 1906 man, in response to the wish expressed in our last issue, writes as follows:—

I am not quite sure as to what is meant by "alumni career," but I agree with you that the fixing of responsibilities is important. How does this suggestion sound: Let us have one secretary, a resident of Boston or vicinity, near enough to keep in touch with the Institute, and a number, say three, of corresponding secretaries, chosen on account of their location.

The secretary shall be elected every two years, but the corresponding secretaries shall be changed only at their request or when they change their residence. In spite of these days of space-annihilation I think there is a good deal in the "local color" idea, and, as we need a central authority to do the business of the class, and need also the advantage of the opinions and ideas of those living at a distance, what is the matter with this suggestion?

We would say that it would be a good plan to take this up at the time of the reunion in June.

From another member were received the following suggestions as to what might be included in the constitution, namely:—

Some Objects of the Class Organization

Its object shall be:—

1. To promote the welfare of the Massachusetts Institute of Technology.
2. To promote the common association of all the members of the class.
3. To gather data from its members regarding results obtained by, and progress of, its members, with special respect to the preparation which they have received at the Institute, such data to be collated and to be presented to an Alumni Association Committee on the School, for the purpose of better informing the Faculty and instructing staff of the actual results which have been obtained from the training received by the members of the class of 1906 at the Institute.

Grouping of Membership

The membership of the class could be made up of geographical groups of members, as follows:—

1. Central, or Boston, Branch, members residing in and about Boston.
2. New York City Branch, members residing in and about New York.
3. Philadelphia Branch, members residing in and about Philadelphia.
4. Pittsburg Branch, members residing in and about Pittsburg.
5. Panama Branch, etc.

These and other branches could be formed and added to the class roll as fast as they organized themselves.

This Central Branch might constitute a body whose duty it should be (1) to endeavor by all possible laudable means to keep the other (distant) members of the class informed about the progress of things at the Institute and among the class in general; (2) to have charge of the class dinners and

of all arrangements properly pertaining to local work; (3) to hold regular monthly dinners at (say) the Technology Club; (4) to exert every effort to engage every local member in some small share of the work of the whole class; (5) to assist the secretaries in editing the class notes for THE TECHNOLOGY REVIEW or any other publication. The Central Branch might start a custom of members meeting down town at convenient noon lunching places.

The monthly dinners of the Technology Club might be carried on with the exercise of good care to have a definite program for each meeting. Programs might include (1) readings and talks by men who from their work in the world are acquainted with what is needed in young men who are just entering professions from college and technical schools; (2) consideration of class work and interests; (3) further items which could be suggested.

It could be the work of the other branches to hold regular meetings at stated times, in convenient centres, and devise ways and means whereby they may acquire and intelligently consider information on matters concerning the progress of the work of the Institute.

A third member suggests that the class be organized, having officers as follows: (1) a small advisory council of (say) three members, all resident of Boston or vicinity; (2) a secretary, who resides in or near Boston; and (3) the secretary or any other duly elected officer of each of the various branches of the class which had organized. Members of the advisory council would serve three years, and one would be elected each year. The duty of this advisory council would be to O. K. urgent important matters which came up and which it would be difficult to refer at short notice to the class as a whole. It should also have charge of the finances of the class, except that it would not have charge of any *permanent* fund the class might decide to establish. The secretary would receive his necessary funds from the advisory council. The establishment of representative correspondents for the unorganized groups, small or large, of members of the class could be left to be arranged for by the secretary.

The geographical register printed for the last issue of the REVIEW brings a number of interesting facts to light. It appears that up

to date of publication three hundred and eighty-nine replies had been received, or exactly one hundred more men had responded than received degrees last June. This is what we want,—the co-operation of everybody who was ever associated with our class,—and it is gratifying to know that such a large number of our comrades appreciate it. Geographically, the class may be conveniently divided into two grand divisions, those in New England and New York and those outside of this locality. Thus there are two hundred and fifty-four men still in the first division, and one hundred and thirty-five in the second,—nearly two-thirds to one-third. One hundred and eighty-two men find old Massachusetts about right, forty-eight have got as far as New York, Pennsylvania claims twenty-two, and Ohio fifteen. Seventeen men have (temporarily, it is to be hoped) forsaken the Stars and Stripes for other shores.

From all the data thus far obtained it seems that twenty-six of our men are doing work for which their Tech training has not especially fitted them. This, we believe, is an evidence of the broadness and elasticity of the Institute courses of study and also another argument in favor of technical education in general. Eight of our classmates are married.

Among the following letters are some which could not be printed in the January number of the REVIEW, owing to lack of space.

[N.B.—The secretaries would like to be notified if any members fail to receive their REVIEW.]

In Philadelphia the men are organizing well. From Clarence B. Powell we have the following interesting account, dated January 26:—

The '06 men who came to Philadelphia have been given a royal welcome, which is certainly in keeping with the friendly spirit of the Quaker town.

In the October issue of the REVIEW appeared a letter from H. LeR. Walker, '05, asking to hear from the '06 men in this city. Not content with this, he found our addresses in the same issue, and invited us in the name of the Tech "'05 Quakers" to meet the '05 men. About fourteen fellows from both classes were there. Cards, Tech songs, and a substantial supper made the evening a most delightful one. The '06 men present were

P. E. Tillson, H. W. Dean, N. A. White, A. C. Taylor, D. C. Davis, and myself.

Shortly before then Wolfe, who was here with the Schuylkill Bridge Company, left for a geological surveying job in Colorado; but we understand the board there failed to satisfy his home tastes, and he is now safely in the shelter of West Medford.

Davis took a few weeks off about Christmas time, and went home to recover from too much Schuylkill water and too little home food.

Two more '06 men have been added to our list, P. N. Critchlow, with the American Bridge Company, and R. H. Booth, with the American Telephone and Telegraph Company.

At the annual meeting of the Technology Club of Philadelphia, held recently, Booth was elected secretary-treasurer, and Tillson a member of the executive committee.

On the 23d of this month the '05 and the '06 men again gathered together, this time at the Windsor Hotel, for an informal dinner. Perhaps the day of the month had something to do with it, anyway the admirable menu, arranged for by Landers, '05, suffered a serious defeat in a very short time. After coffee, Booth gave us a sketch of the plans of the Philadelphia Tech Club, an account of which will probably appear in the REVIEW, and the "'05 Quakers" extended a cordial invitation to the '06 men to join them.

An informal reorganization into the "Tech Quakers" was effected for the purpose of keeping up the Tech spirit, holding monthly meetings of a social nature, and giving a united support to the Philadelphia Club. Walker, '05, was elected president; the writer, secretary and treasurer; and Landers, '05, Booth, '06, and Critchlow, '06, members of an executive committee.

George Burpee made us a flying visit this month while on his way from Kentucky to his home in Maine. He is shortly to take a position with Westinghouse, Church, Kerr & Co. in New York.

We occasionally get to see another Course I. man, H. B. Orcutt. He is with the Phoenix Bridge Company at Phoenixville, Pa.

—W. H. Harvey (XI.) writes enthusiastically of his work. He says he is "what I suppose you may call" an assistant foreman on the Pennsylvania tunnel work at New York. Harvey truthfully says that "there is more money in New York than anywhere else," and by the tone of his letter we judge he may be "getting next" to

some of it. He is in the employ of the O'Rourke Construction Company. Before taking his present position, Harvey was for a time in the engineering department of the New York Board of Water Supply, and later in the service of the Charles River Dam Commission, where there was plenty of "good experience" to be had.—G. C. Simpson (I.) left Columbus at the beginning of April for Boston, where better opportunities seemed open. Simpson has been on the Pennsylvania Railroad—Indianapolis Division—since September, being connected with the maintenance of way department.—Ranney (I.), formerly '06, reports that Professor Swain merely showed the class of 1906 the beginning of the fireworks, and that he explodes a new bomb every day for '07, and occasionally touches off the whole magazine.—"Pete" Barnes (I.) still prefers White Plains to the Big City. Pete doubtless expresses the sentiment of the entire class when he says, "How we *shall* miss those finals!"—Edwin D. A. Frank (II.) writes of a vigorous course of sprouts with the Allis Chalmers Company:—

I am at work ten hours a day; and, as what I have to do is fairly heavy work, and my strength is none too great, I am much more ready to sink into sweet slumber than to write letters when evening comes. . . . In such a concern as the Allis Chalmers Company, which produces such a variety of things, you can, if you keep your eyes open and your mouth shut, learn a great deal about the work. Purely on this account I have already refused one very good offer which I received. . . . I spend my evenings reading up—often in my old text-books, *except* those on mill engineering—questions that have come up during the day, and am also finding time to read snatches of good literature, perhaps a chapter a day, in such books as George Eliot's "Adam Bede," etc. Never miss a chance—how different from Boston!—to see something really good at the theatre or hear something good in the musical line. . . . The Cornell boys around Milwaukee have formed an organization and every two weeks, approximately, they have a grand pow-wow, and all enjoy it immensely. The "Techers" here have not as yet made any (concerted) move towards having a good time, so far as I am aware.

—Charles T. Bartlett (I.) was sick for a fortnight or more in the latter half of March with typhoid fever. The fever itself lasted

only a few days, but it took "Bart" some time to recover from its effects. We certainly rejoice with all his immediate friends in knowing that Bartlett is again up and doing—the Pennsylvania Railroad.—E. M. Eliot (VI.) writes us a glowing letter which shows how life in the Golden West is taking hold of him:—

This country is an engineer's paradise. You ought to know that. Loads of new railroads coming in, lots of surveying, bridge-building, etc. Rich and productive lead and silver mines in the Cœur d'Alene and other districts, with more being opened up daily, and countless millions of ore still untapped. Fertile soil, requiring irrigation only to make it produce splendidly. Lastly, factories and buildings going up in the town and country. Four long-distance lines run, or will run, from Spokane, 150, 400, 25, and 20 miles, respectively: the 400-mile line to Seattle is only projected as yet. Light and power and street cars for Spokane, power for irrigation in the country, power for the mines and factories, lights for twenty or thirty towns around here, and for their factories, furnish ample scope for electricity. The river furnishes the power. Hence the field is wide open for the civil engineer, the hydraulic—particularly the irrigation—engineer, the mining, mechanical, and the electrical engineer, the architect, and in Spokane the sanitary engineer. Spokane land is a fine investment, so is Spokane business; but the best investment of all is mining stock. For every producing mine there are three holes in the ground; but, if you can get an inside track, there are fortunes in the hills. Inside tracks, needless to say, aren't lying around loose, and the small investor stands very little show of escaping unstung.

The biggest electrical stunt here is the Spokane and Inland Empire Company, run by J. P. Groves, of Brooklyn. It is a consolidation of the Spokane and Inland, Cœur d'Alene, and Spokane Traction Companies. It has big money, modern equipment, enterprising management, and liberal charter and franchises. . . .

Seattle, too, is booming in electricity. The Seattle Electric Company (*i.e.*, Stone & Webster) are to build two new plants of 2,500 H. P. total capacity, and a railroad into Portland in the near future. . . .

Have now had experience in general electrical repair work, switch, line, generators, and transformer construction and setting-up work, also lighting, battery, and single-panel work to such an extent that I am no longer an ignoramus on the subject. . . .

This work makes it hard to study. I haven't touched my mathematics, but keep "read up" in the *Electrical World*, and keep one technical book going. Letters are my biggest nuisance. Sent to Paris for Blondell's article on "Transmission Lines," and have been well repaid for my trouble. Have taken lots of good photographs, and have bought a .35 Winchester automatic.

—Norman P. Gerhard writes from Kingston, N.Y., Nov. 18, 1906:—

I was appointed assistant engineer of the New York Board of Water Supply in October, and am stationed here at Kingston in the office of the real estate division of the Reservoir Department. This division has the work of surveying and mapping the properties to be acquired for the great Ashokan Reservoir, which is to be built in the valley of the Esopus Creek, to supply the city of New York.

—In December "Bill" Deavitt wrote as follows:—

I notice in the last issue of the TECH REVIEW I am reported in Aguascalientes, Mexico. I did leave the United States, but went North instead of South, and for over four months have been with the Canadian Copper Company. Until this month I was in Copper Cliff, where I was connected with the laboratory, and had charge of the sampling for a while. At present I am about twenty-five miles from Copper Cliff, and am assistant to the captain of the mine here. I believe you were here on your summer school trip, so won't need to describe the place.

—Philip N. Sadtler, at Duncan Mills, Mechanicville, N.Y., is with the West Virginia Pulp and Paper Company at that address. He says under date of Oct. 6, 1906:—

The prospects with them are very good, and new and varied work very plentiful. I am still unmarried.

—Bob Hursh writes:—

I am getting along pretty well, and have plenty of work all the time. I like Mexico very much, and think there is a great fortune ahead for mining and smelting. This company is first-rate to work for, and their plants are well managed and up to date in every respect. . . . I am on night shift at present moment, and have not time to write more.

—Wendell P. Terrell, at Prairie View, State Normal and Industrial Institute, Texas, wrote Oct. 29, 1906:—

I am hard at it. About a month and a half ago I was not thinking of coming down here. But I am here, and besides have a chance to do good work. Some of the work I have charge of is entirely out of my line, but I believe I can do it. Besides class work, I have supervision of the carpentry and blacksmith shops, laundry, power plant, and repairs. . . . Where are the other boys in Texas located? I would like to know.

I have not told you my title yet. It is "Superintendent of the Mechanical Department and Professor of Drawing." I am going to have it changed, if possible.

—"Hank" Mears writes from Bisbee, Ariz., Nov. 5, 1906:—

I am now at Bisbee, working underground for the Copper Queen Company at the Spray Mine. This is just to get a little practical experience, and I have gone in with the understanding that I shall be changed from one position to another. I may stay here a year.

I am not struck on Bisbee itself, although the mine is pretty fine.

—"Bill" Sheldon writes from Aspen, Col., Jan. 15, 1907:—

This little camp is up here in the Rockies, not far from Leadville. Silver is the mainstay of the town, so there has been a small boom here since the rise in silver.

I am here trying to learn a few things about practical mining, beginning from the ground down. Mr. Wilcox, the superintendent of the Smuggler Mine here, is Tech, '87, and he has given me the run of the mine. I started in "single jacking," then I went on the timber gang, then laid track for a while. Am now going to help on a machine, then take a few stunts with the chain gang. I've been at it since November, and am beginning to feel at home underground. There are quite a number of Austrians, dagoes, French, and Swedes working, so I am getting on to a number of lingo.

—In November, 1906, Wetterer wrote in part as follows:—

Dallas, where I am located, is a thriving city, and has grown wonderfully within the last five years.

—Carl E. Hanson, at 76 Franklin Street, Lynn, Mass., writes March 26, 1907:—

I have been draughting for the General Electric Company for nearly five months, and have been getting some excellent experience along just the lines I desired. I am in the special tool and machinery department, where they design special tools and machines which they need in manufacturing their product, and cannot buy. My work has been mostly designing. The engineers tell us what the machine is to accomplish and the method, perhaps; and then we have to get out the machine and the tools for it.

—Fay Libbey writes from Cobalt, Ontario, March 4, 1907:—

I am helping work a claim here in this remarkable district, and am having a very independent life. We are about four miles out of the town of Cobalt, but we have a warm house and a couple of dogs; and, when the temperature doesn't go down out of sight, it's very comfortable here.

—Sylvanus W. Wilder (II.) writes (from Paterson, N.J.) in part:—

I occasionally go up to New York to the Tech Club, and enjoy it immensely. On March 30 I went up, and about six of the '06 men were present at a smoker given to '98, '99, and '00. When it gets around to '04, '05, '06, we predict the house will not be able to hold us. . . .

The class will sympathize with Richard McKay (III.) who was called home early in April by the sudden death of his mother.—From the Lawrence (Mass.) *Telegram*, Jan. 22, 1907, we have the following:—

John J. Donovan, of 34 Sargent Street, North Andover, with Ernest & Flagg, architects, 174 West 109th Street, New York City, is at present the supervising architect on the Singer Sewing Machine Company's forty-one-story building being erected at the corner of Liberty Street and Broadway, New York City, which, when completed, will be the highest building in the world.

Mr. Donovan graduated from Phillips Andover in the class of 1902 and from the Massachusetts Institute of Technology in the class of 1906, winning signal honors.

He has been with the New York firm named since his graduation, and

up to a short time ago was located in Pittsburg, Pa., but, when operations were commenced upon the erection of the mammoth Singer building, he was transferred to the metropolis.

Mr. Donovan learned the trade of a brick-mason before entering Phillips Andover, and was recognized as an exceptional workman. Working at his trade during the summer vacation, he was able to earn money enough to pay his schooling expenses during the fall and winter months. From Andover he entered M. I. T., and the brilliancy exhibited by him during his course attracted the attention of the faculty, who considered him one of the brightest men in his class.

Securing the practical side first, and then taking up the theoretical, Mr. Donovan is now prepared to make a name for himself in the architectural world.

—Wallace R. Hall visited his home in Newton Highlands early in February.—Blodgett (I.) is still on construction work in Louisiana. Is at present engaged on bridge across Lake Pontchartrain. Gets into New Orleans once in a while to observe the beautiful Creole belles, etc.—Farwell (I.) reports three feet of snow at Buford, No. Dak., during March. He is doing reinforced concrete design for the United States Reclamation Service.—J. Edward Griffin (I.) was in Boston in March on a month's vacation, to attend his sister's wedding. He has been surveying in open pits and underground for the Meriden Iron Company. He finds the weather a bit cold up there in the winter time, and makes a toboggan slide once in a while with the transit. He manages to dodge the ore blasts.—It is reported that the *Mining World* recently published a picture of George Henderson seated in an automobile in the desert.—From the South Framingham (Mass.) *Tribune* of March 15, 1907, we have:—

The many friends of Arthur E. Wells, a graduate of the Framingham High School, doing the four years' course in three years, and afterward graduating with honors from the Massachusetts Institute of Technology, are pleased to learn that he has been appointed to the position of head chemist of the American Smelting and Refining Company of Salt Lake City. He was promoted over the heads of several older and more experienced men. It is not always pull that wins the good places, but ability, grit, and perseverance.

—Charles E. Johnson (II.) has been away from Boston on a trip of inspection in Maine districts for the New England Telephone & Telegraph Company.—“Stew” Coey (VI.) was in Boston in latter part of March. He has been inspecting in electrical insulator work.—Edwin B. Bartlett writes from Norwood, Ohio:—

Leland Woodruff (VI.), and myself are here in Cincinnati, working in the Apprentice Course of the Bullock Electric Manufacturing Company. It is hard work, but gives one a great chance to learn.

—George Henderson (III.) writes from Rhyolite, Nev.:—

I came down here from Minnesota the first of November. I like it very much. The country is new, and things look very promising. Wee Williams came on the first of the year, and is working for a firm of mining engineers here in town. I get all kinds of work here, and am learning something new every day about mining. I do the assaying, surveying, and general office work. The general manager of the company, Mr. Blackmer, is a Tech man of '98.

Rhyolite is a town of about twenty-five hundred inhabitants, and what it lacks in numbers it makes up in hustle. There are quite a number of mines in the immediate vicinity of the town, all being gold mines. Living is rather high, it costing \$50 per month for board and \$25 for a room, but wages are high in proportion. Nobody gets less than \$4.50 a day. There are mountains all around us: to the south-west lies the Funeral Range, which is on the eastern side of Death Valley. The vegetation here is principally sage brush, cactus, and sand. The weather now is great, being just like spring back East, and the nights are cool. They say it gets hot as the devil in the summer time, but I guess I can stand it O. K. When is the next number of the REVIEW coming out? Soon, I hope, as it is good to get the news from the other boys.

—Cliff Wilfley (IH.) wrote from Maryville, Mo., in February:—

With snow on the ground and snow falling, the absence of jingling sleigh-bells makes me think of last winter when I thought it strange that they used bells on their horses with all kinds of vehicles there in old Boston. We hear them occasionally when we get the fair [maid of our choice, and take her out for a sleigh-ride.

And in March from Denver, Col.:—

Here I am up in the air so high that I have to carry a made-to-order, pocket-size Ingersoll compressor in my pocket, which delivers air through a tube into my lungs. I picked up my duds, and skipped to Denver on the 5th, where I had a swell time visiting my uncle's folks and chasing the wind in the fastest car in Denver.

It's somewhat snowy up here, but not really cold weather; and I think I will get acclimated tolerably readily. It takes my breath to walk up one or two of these 1,000 per cent. grades to my boarding-house. I rather think I will like Mexico better if I can get strong enough to do all the work I want to do.

In Denver I went around to Willis Caypless' house to see him, but found he had recently been transferred to Pueblo. I was going to look up Varian, too, but got my sailing orders so suddenly I had to hurry.

The following changes of address have been received since the January issue: Robert E. Cushman (II.) reports that he and Burleigh have resigned their positions with the car heating company in Albany, and are now employed as draughtsmen by the American Bridge Company, Wilmington, Del. They work at the Edge Moor plant which is some three miles out of this city. The address of both is 405 Washington Street, Wilmington, Del.—William A. Sheldon, (III.), Aspen, Col.—Herbert L. Williams has changed from Lead, So. Dak., to Box 54, Rhyolite, Nev., with Cameron & Cox, mining engineers.—Raymond J. Barber (III.), care of Minas del Tajo, Rosario, Sinaloa, Mexico. He is shift man in the cyanide mill.—H. A. Terrell (II.) has returned to Tech for the second term.—Clarence E. Lasher (VI.) has left Lynn to go West in the electrical line.—Shirley P. Newton (V.) has changed from work with Dr. Gill at the Institute to the Sherwin-Williams Paint Company in Ohio.—H. E. L. Lewenberg (X.) is now located at 164 Front Street, New York City, with chemical engineers.—James H. Polhemus (III.), who went to the Joplin zinc district, gives his address as Carthage, Mo. "Dick" is well located, likes his work, which is varied, also the company and his associates, and he expects to learn much in the district.—William J. Deavitt (III.) is reported early in

March out in Iron River, Mich. Address, Iron River's New Brick Hotel.—Nestor M. Seiglie (I.) is now first assistant with the Department of Public Works at Moron, Camagüey, Cuba.

The following men have been located by the secretaries since the last issue of the REVIEW:—

J. H. Peabody (IV.), with Peabody & Stearns, 53 State Street, Boston, Mass.

Carl Emil Hanson (II.), 76 Franklin Street, Lynn, Mass. Draughtsman in special tool and machinery department with the General Electric Company.

Samuel Peter Sargent (VIII., X.) returned to the Institute after a year of absence, but was obliged to take a rest on account of poor health.

Leland Woodruff (VI.), 4926 Linden Avenue, Norwood, Ohio, Apprentice Course in the Bullock Electric Manufacturing Company.

John H. Fellows (II.), New Britain, Conn.

Lemuel D. Smith (XIII.). His address was incorrectly given in the October REVIEW. It should be 153 East 86th Street, New York City, with "The Winthrop Press" at 32 Lafayette Place.

Royall D. Bradbury (I.), assistant in civil engineering, Mass. Institute of Technology, Boston, Mass.

John C. Daly, Jr. (III.), 47 Townsend Street, Roxbury, Mass.

Carl F. Edwards, B. S. (XIII.), '06, 635 Y. M. C. A. Building, Newark, N. J.

Thornton M. Gilmer (I.), with engineering department, Consolidated Gas Company of New York, 208 West 72d Street, New York, N. Y.

Charles A. Holmquist, B. S. (I.), 334 Plymouth Avenue, Rochester, N. Y.

James G. Riley (V.), 12 Fiske Street, Waltham, Mass.

Charles J. Rich (II.), 15 Cottage Street, Norwood, Mass.

Edward L. Mayberry and Llewellyn A. Parker recently announced that they had established an office for the practice of Structural Steel and Reinforced Concrete Engineering under the firm name of Mayberry & Parker with offices at 372-373 Pacific Electric Building, Los Angeles, Cal.

BOOK REVIEW

PHOTOGRAPHY FOR STUDENTS OF PHYSICS AND
CHEMISTRY

By LOUIS DERR, M.A., S.B. Macmillan Company, 1906.

The volume before us is the outcome of a series of experimental lectures which the author has given for a number of years at the Institute, and is designed for a class of readers with some knowledge of the principles of physics and chemistry. The subject is treated from a thoroughly scientific point of view, and the student will find compressed within reasonable compass an admirable treatment not only of matters relating to the choice of photographic apparatus and the procedure to be followed in making a finished picture, but also the reasons and in many cases the theory, so far as it is known, for each step of the work. The scope of the subjects treated may be seen from the following résumé.

The first portion of the work is devoted to a discussion of the optics of the camera. This includes an interesting introductory chapter on pin-hole photography, a description of lenses and lens systems, and an admirably clear treatment of their errors and limitations due to aberrations, astigmatism, distortion, ghosts, etc. There is also included a chapter on the classification of lenses, including telephoto-lenses, and on lens-testing, together with a full discussion of the function of the diaphragm and the effect of "stopping" upon the resulting photographic image.

Comparatively little space is devoted to a description of the various types of cameras and their accessories, as these are of less vital importance from a scientific point of view.

The chemistry and manipulation of the various steps involved in making a photograph, including exposure, development, and printing, are next taken up in detail, the subject being introduced by a preliminary chapter on photochemical action. This intensely in-

teresting topic might perhaps have been discussed with advantage at somewhat greater length, so as to have included, for example, the results of the beautiful investigations of Bunsen and Roscoe on the laws of photochemical action and photochemical induction. The chapter on the intensification and the reduction of negatives with microphotographic illustrations of the effect of various intensifying reagents forms a valuable addition to this section of the work. The chapter on lantern slides will also prove very welcome to teachers, and to all those interested in optical projection, for the many practical suggestions which it contains.

The work concludes with a discussion of several practical methods of testing shutter exposures and with a chapter on the present state of the art of color photography, including the processes of Lippmann, Ives, Joly, McDonough and Wood.

The whole work will be most warmly welcomed by all interested in photography from its scientific aspect, not only for its reliability, for which the wide personal experience of the author in photographic matters is guarantee, but also for the admirable manner in which so wide a range of subjects has been condensed without the work assuming in any way the form of a hand-book of directions.

In conclusion, a word of praise must be added for the excellence of the press-work and illustrations, many of which are new and taken from the author's own negatives.

H. M. GOODWIN, '90.